U.S. Environmental Protection Agency, Region 5

SITE INVESTIGATION WORK PLAN

Revision 0

Tower Standard Site
Lac du Flambeau Indian Reservation
Lac du Flambeau, Wisconsin

EPA Contract No. EP-W-12-009
Task Order 2012

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Prepared for:

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
Bristol	Bristol Environmental Remediation Services, LLC
CEC	Coleman Engineering Company
DRO	diesel range organics
EPA	U.S. Environmental Protection Agency
GRO	gasoline range organics
HI	hazard index
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LUST	leaking underground storage tanks
MS/MSD	matrix spike/matrix spike duplicate
MTBE	methyl tert-butyl ether
Pace	Pace Analytical Services, Inc.
PAH	polynuclear aromatic hydrocarbons
PID	photoionization detector
PM	Project Manager
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
REI	REI Civil & Environmental Engineering, Surveying
SME	Subject Matter Expert
SW	EPA Solid Waste Test Method
TBA	Targeted Brownfields Assessment
TO	Task Order
VOA	volatile organic analysis
VOC	volatile organic compound
WDNR	Wisconsin Department of Natural Resources

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) retained Bristol Environmental Remediation Services, LLC (Bristol), to prepare this Site Investigation Work Plan for the Tower Standard site located on the Lac du Flambeau Indian Reservation in Lac Du Flambeau, Wisconsin (Figure 1). This plan describes the site investigation activities that will occur at this leaking underground storage tank (LUST) site. The EPA assigned this project to Bristol under Contract No. EP-W-12-009, Task Order (TO) 2012, and field activities will take place under Amendment 4 to TO 2012. Site investigation activities conducted under this amendment include advancing and sampling fifteen soil borings, collecting sub-slab and ambient air vapor samples, and sampling four existing monitoring wells.

1.1 SITE BACKGROUND

The Tower Standard site is located on fee-simple land within the Lac du Flambeau Indian Reservation, at the intersection of State Highway 70 and County Road D near Lac du Flambeau, Wisconsin. State Highway 70 borders the site to the north, Haskell Lake to the south, and Haskell Lake Lodge motel to the southwest (Figure 2). The Lac du Flambeau Band of Lake Superior Chippewa Indians' Land Management Office is northwest of the intersection. A bait shop is currently located on the property.

The Tower Standard gas station was built in the early 1940s and operated until 1997. The property held six underground storage tanks, five of which contained leaded or unleaded gasoline. One tank contained waste oil. All tanks were removed in 1997. After the gas station closed, the owner opened a bait and tackle shop called Bill and Linda's Lively Bait and Tackle on the site. This shop operates during the summer months.

Investigations at the Tower Standard site began with a preliminary site assessment in 1997. Stained soils and odors were noted and contamination was confirmed through soil sampling. A sample collected from a private well at the site in 1998 contained benzene. The Wisconsin LUST program paid to replace the well. Afterward, monitoring wells were installed, and samples drawn from the wells showed petroleum compounds in the groundwater. Contamination moved downward in the aquifer and local groundwater flow may have been affected by the pumping of nearby drinking water wells. Subsequently, a groundwater pump and treat system was installed to remove petroleum contamination and prevent offsite migration. The Wisconsin LUST program determined that the site met conditions for closure in 2006, although soil and groundwater contamination was still present.

An unrelated investigation performed under the Targeted Brownfields Assessment (TBA) program began in 2011, in response to a request from the Tribe. A fireworks stand directly across Highway 70 from the Tower Standard site burned down and the Tribe was concerned about perchlorate contamination leaching to groundwater and surface water. The purpose of the investigation was to identify the horizontal and vertical extent of perchlorate contamination in groundwater and assess potential routes of exposure to local residents or ecological receptors. Much of the work occurred on the south side of Highway 70, near the Tower Standard site location because groundwater in this area moves, in part, toward Haskell Lake.

While performing vertical aquifer sampling for perchlorates during the TBA investigation, the field geologist noted strong petroleum odors at 30 feet below ground surface (bgs) in one boring and at 40 to 50 feet bgs in another boring. Samples were not analyzed for petroleum compounds at this time due to the nature of the TBA investigation.

The Tribe obtained a contractor to investigate the suspected petroleum contamination. In 2013, drilling in the same locations used during the TBA investigation, the contractor discovered a total volatile organic compound (VOC) concentration of over 47,000 parts per billion at 25 feet bgs in one groundwater sample taken near the Site. A sample collected immediately adjacent to Haskell Lake found total VOCs of over 2,500 parts per billion at 40 feet in the groundwater.

The Tribe expressed concern to EPA Region 5 about the persistence of petroleum-related contamination at the site. Wisconsin reopened the Tower Standard LUST site to access state LUST funding and started the process of procuring additional field work activities to define the current status of contamination at and near the site.

Bristol's subcontractor REI Civil & Environmental Engineering, Surveying (REI) conducted a private well sampling event in 2014.

In 2015, under another contract, REI advanced 46 soil borings and collected 81 soil samples for laboratory analysis. REI also installed and sampled seven groundwater monitoring wells and eight temporary well points. Though REI's final report has not been completed at this time, Bristol has been furnished material related to this field effort, including boring and well locations and analytical data.

Another round of private well sampling was conducted in September 2015, by a different Bristol subcontractor, CWE, Inc. Bristol submitted a report summarizing the results of both rounds of private well sampling to EPA in January 2016 (Bristol, 2016).

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2.0 SCOPE OF WORK

Bristol and drilling subcontractor Coleman Engineering Company (CEC) will mobilize to the site in March 2016, to advance 15 direct-push soil borings near the Tower Standard site to a depth of 30 feet. Proposed soil boring locations are presented on Figure 3. Two primary soil samples will be collected at each soil boring location. The primary soil samples and associated quality control samples will be sent to Pace Analytical Services, Inc. (Pace) in Minneapolis, Minnesota, for analysis of VOCs including methyl tertiary-butyl ether (MTBE), polynuclear aromatic hydrocarbons (PAHs), diesel range organics (DRO), gasoline range organics (GRO), and Resource Conservation and Recovery Act (RCRA) 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.)

Bristol will collect one sub-slab soil vapor sample; eight indoor and one outdoor ambient air sample. All air samples will be submitted to Pace for VOC analysis by method TO-15.

Bristol will collect groundwater samples from four existing monitoring wells selected by the EPA. Wells will be sampled using a bladder pump and low-flow sampling technique. Groundwater samples will be analyzed by Pace for VOCs, sulfate, nitrate, manganese, and iron. Four primary groundwater samples, one duplicate, one matrix spike/matrix spike duplicate (MS/MSD) pair, and one trip blank (for VOCs) are anticipated.

2.1 PROJECT ORGANIZATION

Descriptions of key staff, and their responsibilities and authorities, are described below.

2.1.1 The EPA Subject Matter Expert

The EPA subject matter expert (SME) for this project is Bob Egan. Mr. Egan is responsible for ensuring that all tasks for the TO are achieved successfully. He will make technical decisions on site management and activities and is ultimately responsible for the overall outcome of the project.

2.1.2 The Bristol Program Manager

The program manager, Scott Ruth, is responsible for overall program performance and quality. Mr. Ruth will be the primary program-level point of contact between the EPA and Bristol. He is responsible for the EPA program, both technically and administratively. Mr. Ruth is responsible for assigning project managers (PMs) and technical support staff based on the nature and complexity of the tasks. Mr. Ruth has several key responsibilities:

- Guide managers and staff on the process and procedures for completing the contractual and technical requirements for starting this support activity
- Provide technical oversight to the PMs
- Define responsibilities and levels of authority
- Establish procedures for project controls and forecasting
- Ensure that systems are in place for monitoring costs, schedule, and performance
- Assign responsibilities for quality assurance (QA), and establishes a system for peer and quality reviews of deliverables
- Integrate subcontractors and fosters Bristol's commitment to small businesses

2.1.3 The Bristol Project Manager

The Bristol PM is Matt Faust. He is responsible for the technical performance and the day-to-day coordination with the SME. As the technical leader, Mr. Faust will be responsible for the technical content of the work and overall project quality. Mr. Faust will have several quality control-related responsibilities:

- Ensure that all project planning documents are prepared and reviewed for the project
- Assign project quality control responsibilities to appropriately qualified personnel at the outset of the project
- Select additional technical reviewers for the project
- Communicate project scope requirements to project team members;
- Communicate with the client and subcontractors
- Ensure that all project deliverables and activities comply with planning documents

- Respond to corrective action requests and ensure that deficiencies are corrected in a timely manner

Mr. Faust oversees the preparation of work plans, the quality assurance project plan (QAPP), and the site safety and health plan. The work plans, QAPP, and site safety and health plan describe procedures to be used during Tower Standard site work. These documents also set the guidelines for verifying the quality and integrity of field activities, including environmental sample collection, analytical testing, health and safety hazards identification, and worker protection measures. Mr. Faust will oversee the preparation and submittal of the site sampling technical memorandum after fieldwork is complete.

2.1.4 Subcontractors

Wherever possible, Bristol will subcontract services from local suppliers and emphasize small business support. Bristol will implement subcontracts that provide "best value" to the government and the project. The choice of subcontractors may be affected by requirements such as those of the local Tribal Employment Rights Office. Subcontract types include firm-fixed price and time-and-materials-type subcontracts. Bristol will use two subcontractors for this project:

- CEC of Iron Mountain, Michigan, will advance soil borings with a Geoprobe drill rig.
- Pave of Minneapolis, Minnesota, will provide analytical services for the soil, groundwater, vapor, and air samples.

If additional subcontractors are required, Bristol will provide the subcontractor details to EPA Region 5.

2.2 SCHEDULE

The fieldwork is anticipated to begin late March 2016. The following summarizes key dates and activities for the Tower Standard LUST site:

Date	Activity
March 14, 2016	Submit draft Site Investigation Work Plan for EPA review.
March 21, 2016	Submit final Site Investigation Work Plan to EPA.
March 29, 2016	Bristol and CEC will mobilize and perform site investigation activities.
April 15, 2016	Submit draft Site Sampling Technical Memorandum detailing where analytical samples were collected
Upon completion of analyses	Pace will submit analytical data package to EPA SME via email.

Notes:
CEC = Coleman Engineering Company
EPA = U.S. Environmental Protection Agency
SME = Subject Matter Expert

3.0 FIELD SAMPLING PLAN

This field sampling plan describes procedures that will apply to the site investigation. The QAPP prepared for EPA Region 5 is presented as a separate document (Bristol, 2015). All soil, water, and air samples collected for analysis will be submitted to Pace in Minneapolis, Minnesota.

3.1 CONTAMINANTS OF CONCERN

Specific contaminants of concern for potential petroleum releases in soil and groundwater include VOCs (such as benzene, toluene, ethylbenzene, xylenes, and methyl tertiary-butyl ether), PAHs, DRO, GRO and metals such as lead.

3.2 ANALYTICAL METHODS

The following analytical methods will be used for laboratory analysis of the soil samples:

- VOCs and MTBE by EPA Method 8260B
- PAHs by EPA 8270SIM
- DRO by WI Mod DRO
- GRO by WI Mod GRO
- RCRA 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) by EPA method 6010B/7471

Volatile organic compounds by TO-15 will be used for laboratory analysis of the air samples.

The following analytical methods will be used for laboratory analysis of the groundwater samples:

- VOCs by EPA Method 8260
- Sulfate and nitrate by EPA Method 300.0
- Manganese and iron by EPA Method 6010B/7470

Table 1 provides information on the analytical requirements (container type, preservative, holding time, etc.) for each analysis. Containers provided by the laboratory will be pre-cleaned, with the preservative added by the laboratory.

Table 1 Soil, Vapor, and Water Analytical Requirements

Matrix	Contaminants of Concern	Analytical Method	Holding Time	Preservative	Sample Size and Container
Water	VOCs	SW8260B	14 days	HCl, cool 2–6°C	Three 40-mL VOA vials
Water	Sulfate, Nitrate	EPA 300.0	48 hours	cool 2–6°C	One 250 ml poly bottle
Water	RCRA 8 Metals with Mn and Fe added	EPA 6010B/7470	180 days	HNO_3 (pH <2), Cool 4°C	One 500 mL poly bottle
Soil	VOCs including MTBE	SW8260B	14 days	NaHSO4 and MeOH, cool 2–6°C	Four glass VOA vials (Terra Core™ kit)
Soil	DRO	WI MOD DRO	14 days	Cool 2–6°C	Two tared 4-oz. glass jars
Soil	PAHs	8270SIM	14 days	Cool 2–6°C	One 8-oz glass jar
Soil	GRO	WI MOD GRO	21 days	MeOH, Cool 4°C	Four glass VOA vials (Terra Core™ kit)
Soil	RCRA 8 Metals	EPA 6010B/7470	180 days	None	One 8-oz glass jar
Vapor: sub-slab	VOCs	TO-15	30 days	None	One 1-L summa canister
Vapor: indoor/outdoor	VOCs	TO-15	30 days	None	One 6-L summa canister

Notes:
°C = degrees Celsius
DRO = diesel range organics
EPA = U.S. Environmental Protection Agency
GRO = gasoline range organics
HCl = hydrochloric acid
HNO3 = nitric acid
L = liter
MeOH = methanol
mL = milliliter
MTBE = methyl tertiary-butyl ether
$NaHSO_4$ = sodium bisulfate
oz = ounce
PAH = polynuclear aromatic hydrocarbon
RCRA = Resource Conservation and Recovery Act
SW = EPA Solid Waste Test Method
WI = Wisconsin
VOA = volatile organic analysis
VOCs = volatile organic compounds

3.3 SITE ACTIVITIES

The following is a description of the field activities and procedures that will be performed for the Site Investigation. The Bristol standard operating procedures for borehole logging, groundwater sampling, soil sampling, low-flow groundwater sampling, sub-slab soil vapor collection, sample management, field measurements, equipment decontamination, water level measurement, IDW management, field documentation, and document control are included as Appendix A.

Up to fifteen borings will be installed using a Geoprobe direct-push drill rig. Samples will be collected in disposable nylon sleeves. The sleeves will be cut open for geologic logging and obtaining field screening and analytical samples. All soil boring location data will be recorded using a Trimble GeoXH GPS.

The purpose of the drilling program is to define the extent of subsurface soil contamination exceeding RBSLs at the site. The first twelve proposed soil boring locations (SB01 through SB12) are depicted on Figure 3. The locations of the remaining borings have not been predetermined, and will be selected based on observed field conditions (specifically field screening results and other field evidence of soil contamination). Borings will be located in areas where the field evidence from previous borings indicates that soil contamination is unbounded or poorly defined. The locations of the borings may be proposed by Bristol field personnel, the Bristol PM, or the EPA SME, and will require approval from the EPA SME. The depths of the borings are not expected to exceed 30 feet. The total maximum drilling footage will be 450 feet; if additional footage is required to complete site activities, the EPA SME will be contacted for direction.

Bristol's subcontractor, CEC, will perform a utility locate prior to site work. Soil borings will be sampled continually for the purposes of logging lithology and conducting field screening. Soil borings will be backfilled with bentonite chips and hydrated to minimize voids. The uppermost 2 to 3 feet of the borings will be backfilled with clean cuttings.

Two primary soil samples will be collected from each of the soil borings. Soil samples will be collected from the depth intervals with the likelihood for the highest levels of contamination (based on field screening response, petroleum odor, or visual evidence of contamination). If no evidence of contamination is observed, the sample depths will be selected based on hydrogeologic characteristics and the likelihood for contaminant migration. Soil samples will be submitted to the project laboratory for analysis for VOCs and MTBE by EPA Method 8260, PAH by EPA 8270SIM, DRO by WI Mod DRO, GRO by WI Mod GRO and RCRA 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) by EPA method 6010B/7471. Thirty primary soil samples, three field duplicates, two MS/MSD pairs, and one trip blank (for VOCs) are anticipated. The samples will be analyzed by Pace, located in Minneapolis, Minnesota.

Bristol will collect sub-slab, indoor, and outdoor air samples. Approximate proposed sub-slab and ambient air samples are shown on Figure 3. The sub-slab sample will be collected at the bait shop located at the former service station. Bristol will install a reusable port through the floor to allow for future sampling events. The sub-slab vapor sample will be collected over an approximately 5-minute period into a one-liter summa canister fitted with a 200-milliliter per minute flow controller. Bristol will collect one indoor air sample at the bait shop and eight at the Haskell Lake Lodge. Four of the air samples collected at the lodge will be in the crawl space, and four will be in hotel rooms. One outdoor air sample will be collected at the same time as the indoor air samples. All outdoor and indoor air samples will be collected over a 24-hour period into 6-liter summa canisters fitted with flow controllers provided by the laboratory. All air samples will be submitted to Pace Analytical for VOC analysis by method TO-15.

Groundwater samples will be collected from four existing monitoring wells. The wells to be sampled have been selected by EPA and include two wells at the MW-16 location (one shallow and one deep) and two wells at the MW-20 location (one shallow and one deep).

The static water levels for all four wells are within ten feet of the ground surface, and the two deep wells are screened at depth (37-42 feet bgs at MW-16 and 20-25 feet bgs at MW-20). Wells will be sampled with a bladder pump using a low-flow groundwater sampling technique. For the shallow wells, the intake of the pump will be located within a couple feet below the static water level. For the deep wells, the intake of the pump will be located at the midpoint of the screened interval. The groundwater samples will be analyzed at the laboratory for VOCs, sulfate, nitrate, manganese, and iron. Three primary groundwater samples, one duplicate, one MS/MSD pair, and one trip blank (for VOCs) are anticipated. The inclusion of nitrate in the analytical suite will require daily sample shipment to the analytical laboratory, due to a 48-hour hold time for this analysis. The samples will be analyzed by Pace, located in Minneapolis, Minnesota.

3.3.1 Field Analysis

Field screening for VOCs in soil will be conducted using a MiniRAE Lite photoionization detector (PID). The procedures for using the PID are detailed in Section 3.3.2.

Field personnel will use a YSI 556 Multiprobe water quality meter while purging wells prior to groundwater sampling. The following parameters will be measured in the field (groundwater sampling procedures are outlined in Section 3.3.4):

- Temperature
- pH
- Conductivity
- Dissolved oxygen
- Oxygen-reduction potential

Turbidity will also be measured using a Hach 2100P Turbidimeter. User manuals for all field equipment are included in the QAPP.

Any method deviations will be noted on the field form that will be used during groundwater sampling (Appendix B).

Potential chemicals of concern, analytical methods, and sample container requirements are summarized in on Table 1.

3.3.2 Headspace Analysis

The following procedures will be followed for headspace analysis:

- Soil will be placed in a clean, Ziploc plastic bag.
- Bags will be filled one-half full with the soil sample.
- The mouth of the bag will be closed immediately.
- The bag will be placed in an environment above 60 degrees Fahrenheit for 30 minutes.
- The contaminant level will be measured by puncturing the bag with the PID.
- The highest level that the PID measures will be recorded.

3.3.3 Soil Sampling

Soil samples to be analyzed for VOCs and GRO will be containerized before all other soil samples. Soil samples that are to be submitted to the laboratory for VOC and GRO analyses (method SW8260B and WI Mod GRO) will be collected using the Terra Core system. The sampling device will be pushed into freshly exposed soil until the sample chamber is filled. The plunger on the sampling device will then be used to transfer the contents of the sample chamber (approximately 5 grams) into a 40-milliliter volatile organic analysis (VOA) vial. The cap to the VOA vial will be replaced immediately. Each sample will consist of four VOA vials (two containing sodium bisulfate, one containing methanol and one unpreserved vial for SW8260B, and all containing methanol for WI Mod GRO). A new Terra Core sampling device will be used for each sample, eliminating the potential for cross-contamination. Following containerization of the soil sample, the VOA vials will be placed on ice until delivery to the laboratory. The extraction will be performed in the field immediately following sample collection, and the sample will be analyzed by the laboratory within 14 days of collection.

3.3.4 Groundwater Sampling

Four existing monitoring wells will be sampled during the site investigation. Groundwater samples will be collected from the monitoring wells using the following procedures:

- Before a well is sampled, the depth to groundwater will be established by manual means with a water level sounder, to an accuracy of 0.01 foot.
- A submersible bladder pump will be used during purging and sampling of the monitoring wells.
- During purging, groundwater will run through a flow-through cell while parameters are analyzed using a water quality instrument such as a YSI meter. Parameters to be measured and recorded include pH, dissolved oxygen, conductivity, temperature, turbidity, and oxygen-reduction potential.
- The bladder pump will be used for collecting the groundwater samples. When collecting VOCs, the flow rate of the pump will be lowered as close to 100 milliliters per minute as practicable. Personnel collecting the sample will wear disposable nitrile gloves.
- Disposable bonded polyethylene tubing will be used with the pump. The disposable bladder will be replaced between each well, and the bladder pump itself will be decontaminated between each well with an Alconox and water solution and a distilled water rinse.
- Groundwater purging and sampling will proceed from the least contaminated to most contaminated well in order to minimize potential cross-contamination. The order will be based on previous sampling results
- In case a monitoring well is purged "dry," the well will be allowed to recover, and then water samples will be collected.
- If possible, each well will be purged until the measured turbidity is below 5 nephelometric turbidity units. Well purging will continue until turbidity has been measured below 5 nephelometric turbidity units s on two consecutive measurements and the indicated parameters have stabilized. If purging continues for 1 hour without these conditions being achieved, the sample will be collected at that time.
- All purged water will be collected and containerized in 55-gallon drums.
- Water samples will be collected using pre-cleaned containers provided by the laboratory.

- The hold time for nitrate analysis is 48 hours. Overnight sample shipments to the Minneapolis laboratory will take place on each day of groundwater sampling in order to meet holding time.

3.3.5 Vapor Intrusion Assessment Sampling

Bristol will assess the potential for vapor intrusion of petroleum compounds at the site through the collection of a sub-slab vapor sample, ambient indoor air vapor samples, and an ambient outdoor air sample.

Before air samples are collected, the area of concern will be inspected and the most likely pathways for vapor intrusion will be identified. Bristol will also inspect the area for ambient factors that could produce background interference. The vapor sampling will occur in and around the building at likely intrusion pathways. The proposed vapor sampling locations are depicted on Figure 3; final locations will be selected on site by Bristol and the EPA SME. Ambient interior air-vapor sample locations will be selected to target pathways (drains, cracks in floor slabs, etc.) if identified.

A total of eleven vapor samples will be collected:

- One sub-slab vapor sample will be collected at the bait shop located at the former service station.
- One ambient interior air sample will be collected at the bait shop.
- Four ambient interior air vapor samples will be collected in the crawlspace below the Haskell Lake Lodge.
- Four ambient interior air vapor samples will be collected in the guest rooms of the Haskell Lake Lodge.
- One ambient exterior air sample will be collected near the Haskell Lake Lodge.

The ambient air and sub-slab vapor samples will be analyzed for VOCs by Method TO-15.

Sub-slab samples will be collected following EPA guidance for collection of soil gas samples, paying particular attention to preventing ambient air from entering the soil gas collection vessel. The indoor air and outdoor air samples will be collected to assess the presence of any ambient air contaminants.

3.3.5.1 Sub-Slab Monitoring Point

Bristol will install one sub-slab monitoring point at the bait shop. The sub-slab monitoring point will be installed using a hammer drill to bore a hole through the concrete slab and into the sub-slab. The sub-slab monitoring point will be an AMS sub-slab gas vapor probe. One vapor sample will be collected from the sub-slab monitoring point and analyzed for VOCs by EPA Method TO-15.

Leak testing of the soil gas monitoring point using helium will be performed during the soil gas sampling. Procedures and additional details for the leak testing are provided in Bristol's standard operating procedures for collecting sub-slab and sub-surface soil vapor samples are provided in Appendix A.

Prior to the collection of the sub-slab vapor sample, a shut-in test will be completed to verify that the connections above the shroud are tight. The shut-in test involves assembling the aboveground sample train and evacuating the lines to a measured vacuum, turning off the pump and closing the valves, and observing the vacuum gauge for approximately a minute to observe any loss of vacuum. If there is a loss in vacuum the fittings will be adjusted and the shut-in test repeated until the sample train holds a vacuum.

A tracer-gas (helium) leak test will then be conducted to check for leaks in the sample train, which may allow atmospheric air to enter the sample. The tracer-gas leak test is completed by inverting a shroud over the probe and sample train, and filling the shroud with approximately 50 percent tracer-gas. The tracer-gas is continuously measured and a consistent amount of tracer-gas is maintained. The sub-slab vapor sample, approximately 1 liter, is then collected in a Tedlar bag, which is screened with a portable tracer-gas meter.

If the tracer-gas is detected at less than 5 percent the concentration within the shroud, then the leak test passes.

The sub-slab vapor sample will be collected into a one-liter Summa canister. The laboratory will provide the Summa canister and tubing used for sampling. The one-liter Summa canister obtained from the laboratory will be certified 100 percent clean, fitted with a vacuum gauge, and evacuated to create a vacuum pressure of 30 inches of mercury. The prepared canister will be fitted with laboratory-calibrated flow controllers to collect at a constant flow rate over a sampling duration of approximately 5 minutes.

Following sampling, the vapor probe will be left in place for future sampling events and sealed with a metal cap flush with the concrete slab surface.

3.3.5.2 Indoor and Outdoor Ambient Air Sampling

Bristol will collect eight indoor ambient-air samples and one exterior ambient-air sample. The indoor air samples will be collected from the crawlspace below the Haskell Lake Lodge and in guest rooms. The outdoor air sample will be collected near the lodge at a location to be determined by Bristol and the EPA SME. Appendix C contains an indoor air sampling questionnaire that a building occupant will complete.

Indoor and outdoor air samples will be analyzed for VOCs by EPA Method TO-15 and collected in six-liter Summa canisters. The laboratory will provide all necessary Summa canisters and flow controllers used for sampling. Each six-liter Summa canister will be laboratory certified 100 percent clean, fitted with a vacuum gauge, and evacuated to create a vacuum pressure of 30 inches of mercury. The prepared canisters will be fitted with laboratory-calibrated flow controllers to collect samples at a constant flow rate over a sampling duration of approximately 24 hours.

3.3.6 Disposal of Investigation-Derived Wastes

Investigation-derived waste will consist of soil cuttings, purge water and the sampler's gloves and sample tubing. Soil cuttings and purge water will be containerized in 55-gallon drums and staged on-site. As characterization of waste will be dependent on analytical results, it is not anticipated that the drummed IDW can be removed from the site before the current task order ends on April 18, 2016. Gloves, disposable bladders and tubing will be disposed of in a municipal trash receptacle.

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4.0 SITE SAMPLING TECHNICAL MEMORANDUM

Bristol will prepare a Site Sampling Technical Memorandum that will present location data for all analytical samples collected. Soil boring locations will be displayed on an aerial photograph image. The technical memorandum will also include field forms and notes.

It is not anticipated that analytical results will be received before the end of the task order. For this reason, Pace will be instructed to email analytical results to the EPA SME once completed. This will include full laboratory packages containing the results of the soil, water, and air sample analysis.

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5.0 SITE-SPECIFIC DATA QUALITY ASSURANCE PROJECT PLAN

Trip blanks will be submitted along with water and soil samples to the laboratory. Trip blanks will be analyzed for VOCs.

For soil and groundwater sample media, one MS/MSD pair will be collected and analyzed for the same constituents as the project samples. One MS/MSD pair will be collected at a rate of 5 percent, or one pair for every 20 or fewer samples collected for laboratory analysis for a total of one MS and one MSD. Field duplicate samples will be collected at a rate of 10 percent or one duplicate for every 10 or fewer primary samples, for a total of two field duplicates. One trip blank will be included in each cooler containing the sample preserved for VOC. A trip blank sample will consist of three laboratory-provided volatile organic analysis vials filled with reagent grade water and preservative. One set of three vials will be submitted for VOC analysis.

Bristol's Region 5 QAPP (Bristol, 2015) outlines the overall quality assurance procedures for collecting, labeling, handling, storing, and transporting samples as well as analyzing the laboratory data.

5.1 DATA QUALITY OBJECTIVES

Bristol has developed site-specific data quality objectives in accordance with EPA's Guidance for the Data Quality Objectives Process (EPA QA/G-4, 1994).

The intent of the site investigation is to characterize the horizontal and vertical extent of soil contamination, monitor groundwater, and evaluate the risk of vapor intrusion to structures on the site.

Petroleum-related contamination, specifically VOCs, have been documented in groundwater at the site. During an investigation conducted by a tribal contractor, petroleum-contaminated groundwater was encountered at 25 feet bgs in one location and at 40 feet bgs adjacent to Haskell Lake.

5.2 SCREENING LEVELS

The groundwater analytical results may be compared to the Wisconsin Enforcement Standards (ES) and Preventative Action Limits (PAL) found in Wisconsin Administrative Code Chapter NR 140, Groundwater Quality, dated January 2012. The enforcement standards represent a concentration above which action must be taken to improve the quality of groundwater. The preventative action limit is a lower concentration above which groundwater quality should be monitored. The enforcement standards values are comparable to EPA maximum contaminant levels established by the Safe Drinking Water Act (U.S.C. Title 42, Chapter 6A, Subchapter XII, Part A, Section 300f, et seq., 1974) (EPA, 1974).

The soil analytical results may be compared to the direct contact soil Residual Contaminant Levels found in Wisconsin Administrative Code Chapter NR 720, Soil Cleanup Standards (2013), and the groundwater pathway protection found in Wisconsin Administrative Code Chapter NR 140, Groundwater Quality, dated January 2012.

Air analytical results for selected analytes may be compared to Wisconsin Vapor Action Levels Quick Look-Up Table dated December 2015. Analytes not included in the Quick Look-Up Table may be calculated from the EPA Risk-Based Screening Level Table. EPA values are based on a Hazard Index (HI) = 1 for non-carcinogens and 1x 10-6 excess lifetime cancer risk for carcinogens (cRCLs). In Wisconsin, the HI= 1 and 1 x 10-5 excess lifetime cancer risk apply to screening indoor air (i.e., vapor action levels). Wisconsin Vapor Action Levels are set by multiplying the EPA cRCL values by 10 for carcinogens, or applying Risk-Based Screening Levels equivalent to HI=1 for non-carcinogens.

5.3 LABORATORY DATA QUALITY

The Pace laboratory of Minneapolis, Minnesota, will analyze the project samples. Pace Minneapolis is certified by the National Environmental Laboratory Accreditation

Committee for SW846 methods, and is also certified through the state of Wisconsin. Pace Minneapolis' certifications are presented in Appendix D. If additional laboratories are used in the future, laboratory-specific information will be presented in an appendix to this plan. Appendix E contains the current laboratory method and reporting limits as well as the laboratory control sample (LCS) acceptance ranges for contaminants of concern associated with petroleum product releases.

The MS/MSD and LCS/laboratory control sample duplicate (LCSD) acceptance ranges, MS/MSD and LCS/LCSD relative percent difference limits, and surrogate recovery acceptance ranges for soil, groundwater, and air are presented in Appendix E.

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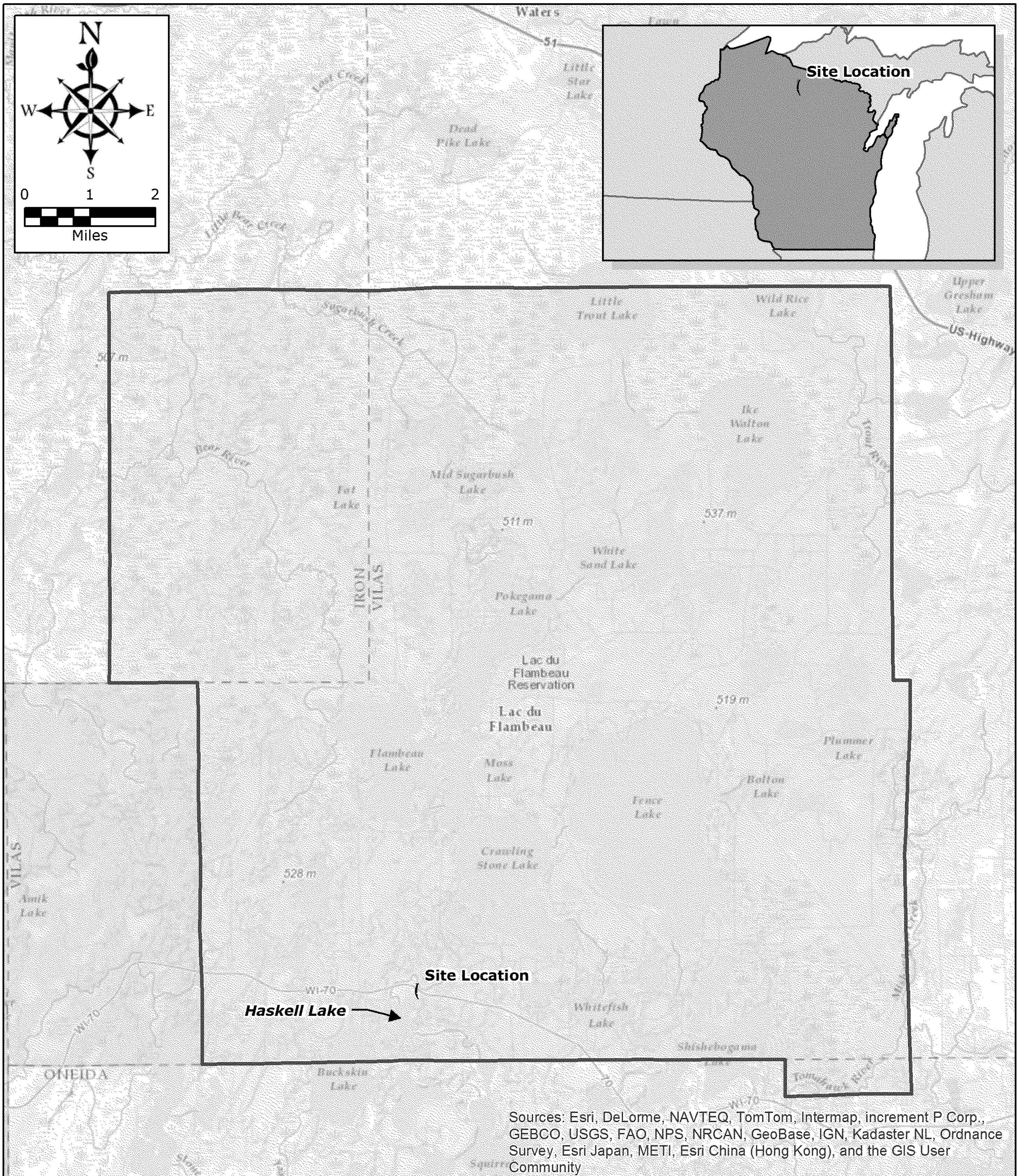
FIGURES



Legend

(Site Location

Lac du Flambeau Indian Reservation

FIGURE 1
LAC DU FLAMBEAU, WI
EPA TASK ORDER 2012 TOWER STANDARD LUST SITE
SITE LOCATION MAP

Bristol Environmental Remediation Services, LLC Phone (907)563-0013 Fax (907)563-6713	DATUM: NAD83 PROJECTION: SP WI ZN FT Project No. 34160024	Date: 6/2/2015 DWN. NAP SCALE 1" = 2 mi APPRVD. JSD	SHEET 1 of 1

Document Path: G:\Jobs\34160024_EPA_2012_Tower\Workplan\Maps\Figure1.mxd

Legend

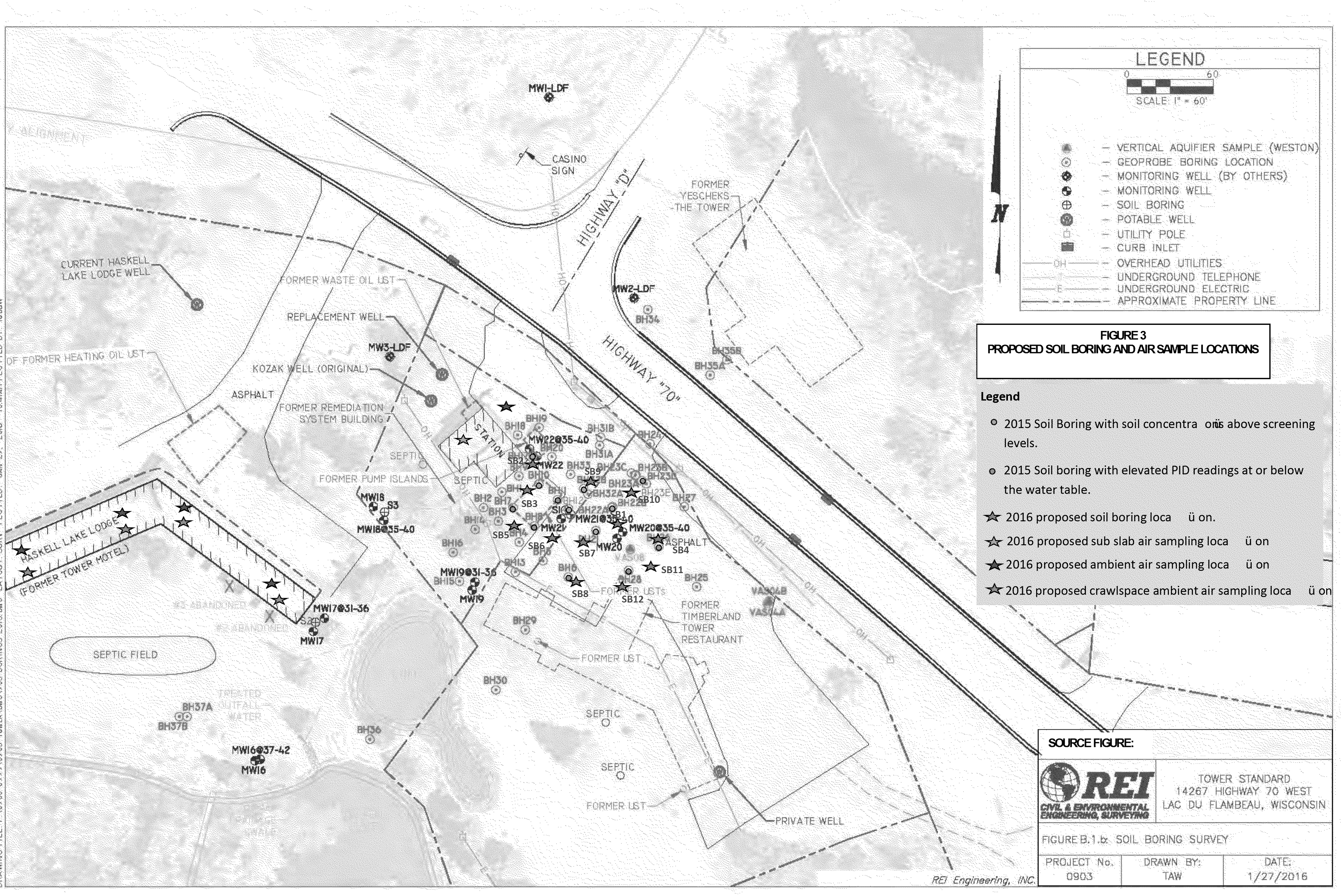
! Site Location
(

FIGURE 2
LAC DU FLAMBEAU, WI
EPA TASK ORDER 2012 TOWER STANDARD LUST SITE
SITE VICINITY MAP

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC
Phone (907)563-0013 Fax (907)563-6713

DATUM: NAD83	Date: 6/2/2015	SHEET 1 of 1
PROJECTION: SP WI ZN FT	DWN. NAP	
Project No. 34160024	SCALE 1" = 200'	
	APPRVD. JSD	

Document Path: G:\Jobs\34160024_EPA_2012_Tower\Workplan\Maps\Figure2.mxd


LEGEND
0
60
SCALE 1" = 60'
VERTICAL AQUIFIER SAMPLE (WESTON)
GEOPROBE BORING LOCATION
MONITORING WELL (BY OTHERS)
MONITORING WELL
SOIL BORING
POTABLE WELL
UTILITY POLE
CURB INLET
OVERHEAD UTILITIES
UNDERGROUND TELEPHONE
UNDERGROUND ELECTRIC
APPROXIMATE PROPERTY LINE
N
FIGURE 3
PROPOSED SOIL BORING AND AIR SAMPLE LOCATIONS
Legend
2015 Soil Boring with soil concentra ons above screening levels.
2015 Soil boring with elevated PID readings at or below the water table.
2016 proposed soil boring loca ü on.
2016 proposed sub slab air sampling loca ü on
2016 proposed ambient air sampling loca ü on
2016 proposed crawlspace ambient air sampling loca ü on
MW1-LDF
CASINO SIGN
HIGHWAY "D"
HIGHWAY "70"
FORMER YESCHEKS THE TOWER
MW2-LDF
BH34
BH35B
BH35A
CURRENT HASKELL LAKE LODGE WELL
FORMER WASTE OIL UST
REPLACEMENT WELL
MW3-LDF
KOZAK WELL (ORIGINAL)
OF FORMER HEATING OIL UST
ASPHALT
FORMER REMEDIATION SYSTEM BUILDING
STATION
FORMER PUMP ISLANDS
SEPTIC
MW22@35-40
MW22
MW18
S3
MW18@35-40
MW21
MW21@35-40
MW20@35-40
MW20
ASPHALT
SB3
SB4
SB5
SB6
SB7
SB8
SB9
SB10
SB11
SB12
MW19@31-36
MW19
HASKELL LAKE LODGE
(FORMER TOWER MOTEL)
MW17@31-36
MW17
SEPTIC FIELD
FORMER USTs
FORMER TIMBERLAND TOWER RESTAURANT
VAS14B
VAS14A
FORMER UST
BH29
BH30
BH36
BH37A
BH37B
TREATED OUTFALL WATER
MW16@37-42
MW16
SEPTIC
FORMER UST
PRIVATE WELL
REI Engineering, INC.
SOURCE FIGURE:
REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
TOWER STANDARD
14267 HIGHWAY 70 WEST
LAC DU FLAMBEAU, WISCONSIN
FIGURE B.1.b. SOIL BORING SURVEY
PROJECT No.
0903
DRAWN BY:
TAW
DATE:
1/27/2016

APPENDIX A

Bristol Standard Operating Procedures

BRISTOL ENVIRONMENTAL REMEDIATION SERVICES, LLC

GROUNDWATER SAMPLING

STANDARD OPERATING PROCEDURE BERS-02

Record of Changes

Revision No.	Date	Prepared by	Approved by
1	10/14/09	B. Allen	L. Maserjian
2	02/16/2010	J. Clark	B. Allen/ J. Clark

GROUNDWATER SAMPLING

STANDARD OPERATING PROCEDURE

Summary: Groundwater samples are usually obtained from either temporarily or permanently installed groundwater monitoring wells. In order to obtain a representative groundwater sample, the stagnant water in the well casing and the water immediately adjacent to the well are purged before sample collection. Depending on the needs of the project, purging can be performed either by traditional methods (purging several full well volumes), or by the low stress/low flow method. Once purging is complete, samples are collected using a sampling device that does not affect the integrity or representativeness of the sample.

Health and Safety: Sampling activity should only be conducted in accordance with an approved Site Health and Safety Plan. Electric generators must be grounded to prevent possible electrical shock.

Interferences and Potential Problems: The primary problems associated with groundwater sampling are the collection of non-representative samples, and sample contamination from equipment or the environment. These can be eliminated or minimized through implementation of strict well purging and sample collection and handling procedures, and by the use of qualified personnel.

To safeguard against collecting non-representative stagnant water, the following guidelines and techniques should be adhered to during sampling:

- Monitoring wells should be pumped or bailed prior to sampling. This should be done in a manner that minimizes alterations to the water chemistry.
- The well should be sampled as soon as possible after purging and stabilization of indicator field parameters.
- Analytical parameters typically dictate whether the sample should be collected through the purging device or through separate sampling equipment.
- Portions of water that have been tested with a field meter probe will not be collected for chemical analysis.
- Excessive pre-pumping of the well should be avoided.

Personnel Qualifications: Sampling personnel will be trained and certified as hazardous site workers per Title 29 Code of Federal Regulations, Part 1910.120e [29 CFR 1910.120(e)]. If applicable, additional qualification requirements will be specified by the Bristol Quality Control Manager prior to any on-site sampling activity.

Equipment and Materials: Prior to deployment in the field, the requisite sampling equipment and materials will be identified, secured, and inspected for signs of damage or potential contamination.

- Ideally, purging and sample withdrawal equipment should be completely inert, economical, easily cleaned, reusable, able to operate at remote sites in the absence of power resources, and capable of delivering variable rates for sample collection. Adjustable rate, submersible and peristaltic pumps are preferred. Peristaltic pumps are only effective if groundwater depths are approximately 25 feet below the ground surface or shallower. When sampling for volatile contaminants, a pump that minimizes or eliminates volatilization should be selected. The use of inertial pumps is discouraged because of their tendency to cause greater disturbance during purging and sampling.
- Sampling and purging equipment (e.g., bailers, bladders, pumps, and tubing) should be made from stainless steel, Teflon®, polypropylene, or glass.
- The use of 1/4 or 3/8-inch inner diameter tubing is preferred. Clean, pharmaceutical grade tubing should be used in drawing and sampling groundwater. Water level measuring devices should be capable of measuring to 0.01-foot accuracy.
- In addition to groundwater sampling equipment, sampling support equipment may include water level indicators, depth sounder, water quality meter (such as YSI), keys for well caps, organic vapor screening device (such as photoionization detector [PID]), plastic sheeting, tubing, pre-cleaned sample containers, sample preservatives, decontamination supplies and equipment, safety equipment, logbooks, field forms, camera, chain- of-custody forms and seals, coolers and ice packs, and labeling, packaging, and shipping supplies. Sample containers will be of the type and size specified in the governing Quality Assurance Project Plans (QAPPs).

Field Preparation: Perform the following steps before any purging or sampling activities:

1. Pre-label and ready all the required sample containers.
2. To the extent known, plan to sample wells in order of increasing contamination.
3. Check the well for security damage or evidence of tampering, and record observations.
4. Record location, time of day, and date in field notebook.
5. Remove locking well cap and well casing cap.
6. Screen well headspace with a PID or equivalent, to determine the presence or absence of volatile organic compounds. Record instrument readings in the field logbook or field form.
7. Lower a water-level measuring device into the well until water surface is encountered and the instrument alarms.

8. Measure distance from water surface to reference measuring point on well casing or protective barrier post, and record in the field logbook or on the field form. If there is no reference point, measure from the top of the steel casing, top of PVC riser pipe, from ground surface, or some other position on the wellhead, and note in the field logbook or field form.
9. Measure the total depth of the well and record in the field logbook or field form. Measure well depth either the day before sampling or after all sampling in that well has been completed. Take care to minimize disturbance of the water column.
10. Calculate the volume of water in the well using the following calculations and data reduction:

    Well volume: $V = 0.041d^2h$

    V = volume of one well casing of water in *gallons*

    d = inner diameter of the well casing in *inches*

    h = total height of the water column in *feet*

    Based on this equation, one well volume can be calculated simply by multiplying the height of the water column in feet by the appropriate conversion factor, which is based on the casing diameter as follows:

Diameter	2-inch	3-inch	4-inch	5-inch	6-inch
Volume (gal/ft.):	0.1632	0.3672	0.6528	1.02	1.4688

11. Select the appropriate purging and sampling equipment based on requirements in the site-specific QAPP.

Purging: To ensure that a representative groundwater sample is collected, a well is typically purged prior to sample collection. Well purging is accomplished either by using low-flow procedures or removing a prescribed volume of water from the well (usually a minimum of three to five well volumes). During both purging methods, water quality parameters should be monitored for stabilization.

Purging may be performed by using bailers or pumping mechanisms. In general, a pump is preferred over a bailer for purging and sampling because it will not stress the well like dropping a bailer into the well. If using a pump, select a low removal rate in order to not stress the well. Tubing should remain filled with water, so as to minimize possible changes in water chemistry upon contact with the atmosphere.

If possible, avoid purging wells to dryness by slowing the purge rate. If the well has a poor recharge rate and is purged dry, sample the well once the water level has recovered sufficiently to collect the appropriate volumes for all required analyses. Record in the field logbook or on the field form that samples were collected, even though water quality parameters did not stabilize or the required volume of water was not removed.

If water quality parameters have not stabilized after 1 hour of purging, options include continued purging until stabilization is achieved, or collecting samples although stabilization has not been achieved. Record all actions taken in the field logbook or field form.

Once the purging requirements have been met, the groundwater sample can be collected. Collect and dispose of purge water and solid investigation-derived waste (IDW) as prescribed in the site-specific QAPP.

These procedures are used for sampling events that require purging prior to sampling. For some projects, sampling may be performed without purging the well first. Refer to the non-purge sampling procedures.

Low-flow purging

For low-flow purging and sampling, the Region 1 U.S. EPA Low Flow Guidance Document [*Low Stress (low flow) Purging and Sampling Procedure for the Collection of Ground Water Samples from Monitoring Wells*, July 30, 1996, Revision 2] will be followed, and is summarized below.

1. After the water level and total well depth have been measured, lower the submersible pump or tubing (Teflon, polyethylene, or other approved material) for peristaltic pump slowly (to minimize disturbance) into the well to the middle of the submerged, screened interval of the well, or appropriate depth based on site-specific conditions. Placing the pump or tubing in this manner will reduce the risk of drawing down the water table to below the pump intake, thus preventing the introduction of air into the sample tubing.
2. Before starting the pump, measure the water level and record it on the Groundwater Low Flow Purging Form.
3. Start the pump at its lowest speed setting and slowly increase the speed until discharge occurs. Check water level. Adjust pump speed until there is little or no water level drawdown (less than 0.3 feet). If the minimal drawdown that can be achieved exceeds 0.3 feet, but remains stable, continue purging until indicator field parameters stabilize (described in Number 5, below).
4. Monitor and record water level and pumping rate every 3 to 5 minutes during purging. If a flow rate meter is present, record the pumping rate every 3 to 5 minutes as well. Record any pumping rate adjustments (both time and flow rate). Pumping rates should, as needed, be reduced to the minimum capabilities of the pump to ensure stabilization of indicator parameters. Adjustments are best made in the first 15 minutes of pumping. The final purge volume must be greater than the stabilized drawdown, plus the extraction tubing volume.
5. Monitor indicator field parameters every 3 to 5 minutes during purging, with a calibrated combination type meter (i.e., YSI, etc.). The following field parameters will be monitored: turbidity, temperature, specific conductance, pH, oxidation-

reduction potential (ORP), and dissolved oxygen (DO). All measurements, except turbidity, must be obtained using a flow-through cell. Transparent flow-through cells are preferred. This allows the field personnel to watch particulate buildup within the cell. If the cell needs to be cleaned during purging, continue pumping and disconnect the cell for cleaning. Then reconnect and continue monitoring.

6. Groundwater samples can be collected after the field parameters stabilize within the following limits:

    - Turbidity: +/- 10% for values greater than 1 nephelometric turbidity units (NTUs)
    - DO: +/- 10 %. Note: DO may not stabilize unless using a flow-thru cell. If not using a flow-thru cell, disregard this parameter for the purpose of establishing stability
    - Specific conductance: +/- 3%
    - Temperature: +/- 3%
    - pH: +/- 0.1 pH units
    - ORP: +/- 10 millivolts

Purging is considered complete and sampling may begin when all of the above indicator field parameters have stabilized. Do not change the flow rate of the pump prior to sampling. Remove the flow through cell prior to collecting the groundwater samples, and collect directly from the pump discharge.

General well purging – removing specified volume of water

During general well purging, a specified minimum volume of water (usually three to five well casing volumes) should be purged prior to sampling. Water temperature, pH, turbidity, DO, ORP, and specific conductance should be periodically measured during purging using a calibrated combination type meter (i.e., YSI, etc.). These parameters should be measured and recorded approximately every three to five minutes, or after each well volume is removed. The sample can be collected after the required volume of water has been purged and the parameters have stabilized within the limits described above in Number 6 of the low-flow purging section.

Purging Methods

Pumping mechanisms – peristaltic pumps, submersible pumps, non-contact gas bladder pumps, and suction pumps, etc.

1. Assemble the pumping unit. For more information on pump assembly and operation, refer to the specific user's manual for the type of pump used.
2. Lower the tubing (peristaltic pump) or pump/tubing assembly (submersible pumps)

into the well to the midpoint of the zone to be sampled. If possible, keep the tubing or pump intake at least 2 feet above the bottom of the well, to minimize mobilization of particulates present in the bottom of the well.

3. Attach a water quality meter to the outlet tubing to monitor water quality parameters.
4. If required, attach a flow meter to the outlet tubing to measure the volume and rate of water purged.
5. Attach the power supply (typically a battery, generator, etc.). Use a ground fault circuit interrupter (GFCI), or ground the generator to avoid electric shock.
6. Start the pump at its lowest speed setting and slowly increase the speed until discharge occurs. Adjust the pump speed until there is little or no water level drawdown (less than 0.3 feet). If the minimal drawdown that can be achieved exceeds 0.3 feet, but remains stable, continue purging until indicator field parameters stabilize.
7. During purging, monitor water quality parameters and water level drawdown.
8. After water parameters have stabilized, disconnect the water quality meter and flow meter, then collect sample.

Bailer purging

1. Attach the line to the bailer and slowly lower until completely submerged, be careful not to drop the bailer to the water, which would cause turbulence and the possible loss of volatile contaminants.
2. Pull bailer out, while ensuring that the line either falls onto a clean area of the plastic sheeting or that it never touches the ground.
3. Empty the bailer into a pail of known volume (for example, a five-gallon bucket, preferably graduated). Use the volume of the pail to estimate the amount of water removed.
4. During purging, monitor water quality parameters.
5. Remove the required amount of water.
6. If water quality parameters have stabilized, the sample can be collected. If parameters have not stabilized, continue purging until stabilization has been achieved, or collect sample if directed to do so by the project manager.

Sampling: Sampling may be accomplished using pumping mechanisms or bailers. Care must be exercised during the use of bailers because of their tendency to disturb sediment, leading to increased turbidity.

General procedures

1. If using a pumping mechanism, do not change the flow rate maintained during purging.
2. Remove the water quality and flow rate meters, if used.
3. If using a pumping mechanism, collect non-filtered samples directly from the outlet tubing into the sample bottle. For filtered samples, connect the pump outlet tubing directly to the filter unit. The pump pressure should remain decreased so that the pressure buildup on the filter does not blow out the pump bladder, or displace the filter.
4. For certain projects, sampling may be performed without purging the well first, typically using a bailer. It is preferable to record the water quality parameters (turbidity, DO, specific conductance, temperature, pH, and ORP) before the sample is collected. Non-purge sampling will be performed in accordance with the steps below.
5. If using a bailer, lower the bailer slowly and gently into the well, taking care not shake the casing sides or to splash the bailer into the water. Stop lowering at a point adjacent to the screen. Allow the bailer to fill and then slowly and gently retrieve the bailer from the well, avoiding contact with the casing, so as not to knock flakes of rust or other foreign materials into the bailer. If the bailer comes with a Bottom Emptying Devise (BED), place the BED into the bottom of the bailer. Fill the sample containers from the BED. A specific BED for volatile samples is recommended because it reduces the outflow to a very low laminar rate. This device is typically purchased separately from the bailers.
6. Collect samples in appropriate containers in order of volatility, with the most volatile samples collected first. Containers should be either pre-labeled or labeled immediately after sample collection. For collecting volatile samples using the zero-headspace procedure, follow procedures specified at the end of this section.
7. Fill containers slowly (avoid turbulence).
8. Filter and preserve samples as specified in the site-specific QAPP.
9. If duplicate samples, split samples, or other quality assurance/quality control (QA/QC) samples are required, collect them at the same time as the primary sample.
10. Cap sample containers tightly and place into a sample cooler. Samples must be chilled and maintained at a temperature of 4 degrees Celsius. Do not allow samples to freeze.
11. Replace the well cap.
12. Log all samples in the field notebook or on field forms.
13. Package samples and complete requisite paperwork.
14. Dispose of all liquid and solid IDW in accordance with project planning documents.

Volatile sampling using zero-headspace procedure

1. Open the sample vial, set cap in clean place, and fill the vial just to overflowing. Do not rinse the vial or allow excessive overflowing. There should be a meniscus on the top of the filled vial.
2. Check that the cap has not been contaminated and carefully cap the vial. Slide the cap directly over the top and screw down firmly. Do not over tighten because the cap may break.
3. Invert the vial and tap gently. It is imperative that no air is entrapped in the sample vial. If an air bubble appears that is smaller than approximately 1.0 millimeter, the sample is still viable. If the bubble(s) are larger, discard the sample and begin again.
4. Place the vial in a protective foam sleeve, and then place into the cooler.

Quality Control: The following procedures apply:

- Samples will be packaged, handled, and shipped as prescribed in BERS-03 *Sample Management Standard Operating Procedure.*
- Equipment will be operated and used in accordance with the manufacturer's instructions, unless otherwise specified in the site-specific QAPP.
- Equipment examination activities should occur prior to field deployment, and they should be documented. It is especially important to check that the correct number and type of sample bottles are being sent/taken to the field prior to starting the field activities.
- Depending on the needs of the project, if using non-disposable equipment, collect an equipment rinsate blank to evaluate the potential for cross contamination from the purging or sampling equipment. Collect equipment rinsate blanks by pouring analyte-free water over the decontaminated sampling equipment.
- Depending on the needs of the project, a field blank may be required per matrix and for each sampling event to evaluate whether contaminants have been introduced into the samples during the sampling process. Field blank samples will be obtained by pouring laboratory-grade, certified organic-free water (for organics) or deionized water (for metals) into a sampling container at the sampling point.
- One trip blank per cooler is required when submitting samples for volatile organic analysis. Trip blanks for water and soil samples are prepared and sealed by the laboratory. They are transported to the field and returned, unopened, to the laboratory in the same cooler as the samples collected for volatile organic compound (VOC) analysis.
- Blanks will be collected at the frequency and locations specified in the site-specific QAPP. Blanks are analyzed for the same target analytes as the associated field samples. Each blank receives a unique sample number and is submitted blind to the laboratory.

BRISTOL ENVIRONMENTAL REMEDIATION SERVICES, LLC

SAMPLE MANAGEMENT

STANDARD OPERATING PROCEDURE BERS-03

Record of Changes

Revision No.	Date	Prepared by	Approved by
0	01/15/08	B. Allen	S. Ruth
1	2/23/2010	M. Faust	B. Allen

SAMPLE MANAGEMENT

STANDARD OPERATING PROCEDURE

Method Summary: To ensure the quality and integrity of analytical data, samples will be managed in accordance with rigorous sample handling, shipping, and custody protocols at all times. Pertinent protocols will be determined prior to initiation of field sampling activity and will apply to sampling, transport, and analysis activities.

Health and Safety: Sampling activity should only be conducted in accordance with an approved Site Health and Safety Plan.

Interferences and Potential Problems: Improper sample management may result in a number of problems, including, but not limited to:

- Inability to collect samples during the field event due to lack of appropriate sample containers and/or preservatives.
- Contamination and/or loss of samples or sample constituents through improper storage and handling, tampering, or breakage.
- Inability to validate resulting data.
- Development of erroneous conclusions regarding site contamination based on inaccurate data and/or problems correlating data and sample locations at the site.
- Mishandling of residual sample material following analysis.

Personnel Qualifications: Sample management personnel will be trained and certified as hazardous site workers per Title 29 Code of Federal Regulations, Part 1910.120(e) [29 CFR 19 10.120(e)] and trained in applicable DOT sample shipping regulations of 49 CFR Part 172, Subpart H. If applicable, additional qualification requirements will be specified in the site-specific Quality Assurance Project Plan (QAPP) and met by designated personnel.

Equipment and Materials: Equipment selection will be based on the objectives of the sampling program and the analytes of concern. Prior to deployment in the field, the requisite sampling equipment and materials will be identified, secured, and inspected for signs of damage or potential contamination.

Sample Identification and Labeling: Sample identification and labeling protocols will follow the procedures specified in the governing program QAPP.

Each collected sample will be assigned a unique sample identification number. The designated sample number will be included on the sample label and referenced on associated sample tags, field logbooks, chain-of-custody forms, analysis request forms, and all data reports related to the samples.

To prevent misidentification of samples, the field team will affix legible labels to each sample container. The labels will be sufficiently durable, and an indelible pen will be used to record data on the labels, so that sample identification information remains legible even when wet. Markers should never be used for sample labeling, as they can be a source of volatile compounds and potential contamination of the sample. Additional labeling requirements will be presented in the site-specific QAPP.

Information that is generally included on the container label and/or sample tag includes:

- Sample identification number;
- Sample collector's name or initials;
- Date and time of sample collection;
- Chemical/physical preservatives used;
- Type of sample (composite, grab, filtered); and
- Analytical parameters requested

Sample Containers and Coolers: Sample containers will be selected, prepared, cleaned, and controlled in accordance with EPA Office of Solid Waste and Emergency Response (OSWER) Directive #9240.0-05A *Specifications and Guidance for Contaminant-Free Sample Containers* (EPA *540/R-93/05* 1, December 1992), and as specified in the governing program QAPP. In advance of each sampling event, the subcontract laboratory should prepare a complete set of precleaned sample containers.

Prior to field activity, field personnel will implement the following steps:

1. Check all sample containers against the specifications of the site-specific QAPP. Ensure that the sample containers and caps are in good condition and free of obvious contamination, constructed of the appropriate material (i.e., plastic or glass), contain appropriate preservative solutions, and will hold sufficient volume for planned analyses, if specified.
2. Verify that sample identification labels are properly affixed to each container.
3. Verify that an adequate quantity of each type and volume of sample container is available for the anticipated environmental and quality control samples. Verify that extra containers are readily available to field staff as contingency for damaged or potentially contaminated containers, and for collecting samples of opportunity.
4. Ensure that containers and coolers are stored in clean areas to prevent exposure to fuels, solvents, and other potential contaminants.

Sample Collection: Field personnel will collect samples as prescribed in the governing QAPP. Samples should be transferred in the field from the sampling equipment directly into a container that has been specifically prepared for that sample (based on the analytes of concern, preservation requirements, and the type of analysis to be performed).

To minimize the potential for cross-contamination and loss of sample constituents, sample fractions should be collected and containerized in the order of volatilization sensitivity of the analytes of interest. The following sample collection order is recommended:

- Volatile organic compounds (VOCs)
- Purgeable organic carbon
- Purgeable organic halogens
- Total organic halogens
- Total organic carbon
- Extractable organic compounds
- Metals
- Phenols
- Cyanide
- Sulfate and chloride
- Turbidity
- Nitrate and ammonia
- Radionuclides
- Ignitability
- Corrosivity
- Reactivity

As the samples are being collected, or immediately thereafter, the field sampling team will document the date and time of sample collection, pertinent field information (e.g., sampling depth), and the identity of sampling personnel, on each container label. Additional detail on the sampling event may be documented in the site logbook as appropriate.

Sample Custody: BERS will ensure the integrity and security of all samples under their control, using a stringent chain-of-custody protocol. This will be supplemented as needed to meet all work assignment requirements.

During the sampling event, field personnel will prepare a chain-of-custody form documenting each sample collected as follows:

- Sample numbers, date and time of collection, sampling location, name of the person who collected the samples, preservatives used, and the analyses requested.
- Document each sample transfer on the custody sheet. Ensure that this form remains with the samples until they arrive at, and are processed by, the laboratory.
- When samples are relinquished to a commercial carrier for transport to the laboratory, sign the chain-of-custody form under “Relinquished By,” enter the name of the carrier organization under “Received By,” and document the date and time of transfer. Upon receipt of the samples, the laboratory sample custodian will similarly sign and date the chain-of-custody form.

Under no circumstance is there to be a break in custody.

Sample Packaging: Unless otherwise specified in the site-specific QAPP, field personnel will implement the following steps when packaging environmental samples for shipment:

- Tighten all sample lids. Verify that all containers are labeled and intact. Verify that all container labels are secure, legible, and complete.
- Bag samples individually in appropriate-sized plastic bags (e.g., Ziploc®) and seal. Up to 3 VOC vials may be packed together in container bags.
- Secure and tape the drain plug on the cooler with fiber or duct tape.
- Spread inert packing material (rubber foam, air pillows, or “bubble” wrap) in the bottom of the bag inside the cooler and place sample bags on top of the packing material.
- Include a temperature blank (a small container filled with water) to be used by the laboratory to determine the internal temperature of the cooler upon receipt at the laboratory.
- Place ice packs (e.g., blue ice) into cooler. If ice packs are unavailable, place ice into doubled heavy-duty polyethylene bags and seal with tape. Put double-bagged ice on top of, and in between, samples. Fill in remaining space with packing material.
- Place the chain-of-custody record into a plastic sealable bag (e.g., Ziploc), seal the bag, and tape it to the inside of the cooler lid.
- Close the cooler and tape the top of the cooler shut. Affix custody seals to the top and sides of the cooler, such that the cooler cannot be opened without breaking at least one seal.
- Mark the cooler with “This End Up” and arrows to indicate the proper upward position.
- Tape a label containing the name and address of the destination to the outside of the cooler.

Sample Scheduling, Delivery, and Holding Times: In work assignments where analytical services are procured from a subcontractor laboratory, the laboratory will be required to designate a point of contact (POC) for both normal business hours, and for emergency situations during off-hours. In addition, the laboratory will be required to designate a sample custodian, who will be notified by the BERS field sampling supervisor each time samples are shipped.

Unless otherwise approved, samples will be delivered to, and received by, the laboratory within 24 hours of collection.

Sample holding time tracking begins with the collection of samples, and continues until the analysis is complete. The site-specific QAPP will specify holding time requirements for each analyte of interest to the project.

Quality Control: No additional QC procedures apply.

Data Management and Records Management: Sampling records will be generated and maintained as prescribed in this procedure and the governing QA plans. Sampling data will be documented on field data sheets or in the logbooks.

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BRISTOL ENVIRONMENTAL REMEDIATION SERVICES, LLC

FIELD MEASUREMENT AND TEST EQUIPMENT

STANDARD OPERATING PROCEDURE BERS-04

Record of Changes

Revision No.	Date	Prepared by	Approved by
0	01/15/09	B. Allen	L. Maserjian
1	2/5/10	M. Hannah	B. Allen

FIELD MEASUREMENT AND TEST EQUIPMENT

STANDARD OPERATING PROCEDURE

Summary: Various types of instruments are used to measure the physical and chemical characteristics of a sample in the field. In general, field measurement and test equipment (M&TE) are maintained and operated according to the manufacturer's instructions specific to each instrument. Field M&TE are inspected for function and damage on a regular basis and prior to each use. All findings are recorded in the appropriate logbook. Field M&TE are calibrated in accordance with the manufacturer's specifications. Calibrations are checked on a regular basis and prior to and after use in the field. When daily calibrations are required, calibrations and/or checks are performed at the beginning and end of the day, and the results are recorded in the field logbook. When daily calibrations are not required during field use, checks against appropriate standards are performed.

Health and Safety: Field activities will only be conducted in accordance with an approved Site Health and Safety Plan.

Interferences and Potential Problems: When multiple measurements are taken from the same sample material, the order in which the measurements are made becomes very important. Conductivity may be affected by temperature of the measured solution; therefore, temperature of the sample should be read first, so that appropriate adjustments can be made in accordance with the manufacturer's instructions.

Personnel Qualifications: Field personnel will be trained and certified as hazardous site workers per Title 29 Code of Federal Regulations, Part 1910.120(e) [29 CFR 1910.120(e)]. If applicable, additional qualification requirements will be specified in the site Quality Assurance Project Plan (QAPP).

Equipment and Materials: Prior to deployment in the field, the appropriate equipment and materials will be identified, secured, and inspected for signs of damage or potential contamination. Manufacturer's instructions and specifications for each instrument used will be maintained in the project files. Materials used for calibration of instrumentation, such as standard solutions, must be traceable to relevant, recognized performance standards.

Planning Considerations: Procedures used for the maintenance and use of field equipment, including those performed by subcontractors and suppliers, will be outlined preceding field activities and in accordance with the procedures outlined in this SOP. Equipment must be inspected prior to use in the field for damage and function. Calibration and maintenance of field equipment will be performed according the manufacturer's instructions for that particular instrument. The required frequency of calibration varies between instruments. While some instrumentation must be calibrated only annually or semi-annually, other instrumentation must be calibrated daily during use in the field. Instrumentation that does not require field calibration usually requires a check against a standard. Attention should be paid to specific requirements for each instrument used in the field, and it is important to remember that the requirements for each instrument may differ.

Instructions for the Maintenance and Use of Field Equipment: Refer to the following sections for instructions on the proper calibration, maintenance, and use of field instrumentation used to measure physical/chemical properties of sample material:

Multi-parameter Water Quality Meter: Many water quality meters are capable of measuring several parameters, such as temperature, conductivity, pH, dissolved oxygen (DO), and oxygen reduction potential (ORP). The following sections provide general instructions for calibrating each parameter. The field personnel will adhere to the calibration instructions for the each instrument used.

Temperature

Temperature, defined as a measure of hotness or coldness on a defined scale, is measured using a thermometer. Three types of thermometers are commercially available: digital (thermocouple) thermistor; glass bulb, mercury-filled thermometer; and bi-metal strip dial indicator thermometer.

Calibration

Thermometers will be calibrated in accordance with the manufacturer's instructions or calibrated semi-annually against a National Institute of Standards and Technology (NIST)-certified thermometer. Thermistors should be checked against a mercury bulb thermometer in water prior to use, and should agree within ± 0.5° degree Celsius (°C).

Maintenance

All thermometers should be inspected regularly and prior to use for leaks, cracks, and function.

Use

Measurements should be made in situ, when possible. To measure the temperature of sample material, perform the following steps:

1. Clean the probe with deionized water, and immerse into the sample.
2. Swirl the thermometer in the sample.
3. Allow the thermometer to equilibrate with the sample.
4. Suspend the thermometer away from the sides and bottom to observe the reading.
5. In a logbook, record the reading to the nearest 0.5° C.
6. Report results to the nearest 0.5° C.

Conductivity: Conductivity, the quality or power of conducting or transmitting, is typically measured using the Wheatstone bridge meter. Conductivity is measured in millisiemens per centimeter (mS/cm) at 25° C. While the sample temperature may be lower, nearly all conductivity meters will convert specific conductance (which is not corrected for temperature) to conductivity.

Calibration

Conductivity will be calibrated in accordance with the manufacturer's instructions. During use in the field, checks against a one-point standard will be performed to ensure the accuracy of the meter, and results will be recorded in a field logbook. The following steps will be implemented both before and after use of the meter to measure the conductivity of sample material in the field:

1. Check and record the temperature of the standard solutions.
2. Rinse the probe with analyte-free water before immersing it in the standards solution.
3. Turn the probe on, immerse it in the standard solution, and record the results.
4. If the meter is not accurate to within ± 10% of the standards, correct the problem before proceeding.

Maintenance

All conductivity meters should be inspected regularly and prior to use for damage and function. Conductivity sensors may become fouled with minerals or other materials, and may require cleaning in the field. Cleaning is accomplished by passing a nylon brush along the sensor surface in a light scrubbing motion, until a metallic shine appears on the sensor. Follow up the cleaning with a fresh or deionized water rinse. DO NOT use a metal brush to clean the sensor surface.

Use

1. Collect the sample and record its temperature.
2. Correct the instrument's temperature adjustment to the temperature of the sample (if necessary).
3. Immerse the probe in the sample. Keep the probe away from the sides and bottom of the container, and ensure that the sensor is in full contact with the sample.
4. Record the results in a logbook.
5. Rinse the probe.
6. Report results to the nearest ten units for readings below 1,000 mS/cm at 25° C and the nearest one hundred units for readings above 1000 mS/cm at 25° C.

Hydrogen Ion Concentration (pH): The pH of a solution is defined as the negative logarithm of the effective hydrogen ion concentration in gram equivalents per liter. The pH is used to measure acidity and alkalinity on a scale ranging from 0 to 14, with 7 representing neutrality. Orion and YSI Water Quality Monitoring System meters are examples of commercially available meters used to measure the pH of liquid-state material.

Calibration

Any pH meter will be calibrated in accordance with the manufacturer's instructions. During use in the field, a two-point or three-point standard will be used to ensure the accuracy of the meter. R esults will be recorded in a field logbook. The expected pH of the sample to be collected, estimated from either historical data or by using four-color pH paper, should fall between the two buffering points. Both prior to and after use in the field, the following procedures should be followed as a minimum:

1. Remove the meter from storage and allow it to equilibrate to ambient temperature.
2. Select either pH 4 and pH 7, or pH 7 and pH 10, as the appropriate standard solutions as described above.
3. Use a thermometer to determine the temperature of the buffering solutions, and record the temperature.
4. Rinse the probe with analyte-free water, and immerse it into the pH 7 buffer and set the meter to 7. If the solution temperature is not at 25°C, a table with corrected pH values can be found on the calibration solution bottle or in the operations manual.
5. Rinse the probe with analyte-free water and immerse it into the second buffer, and record the reading.
6. Rinse and store the probe in a container filled with analyte-free water.

Maintenance

All pH meters should be inspected for damage and function regularly and prior to use. During use, periodically check the calibration of the meter by rinsing it with analyte-free water and immersing it into the pH 7 buffer solution.

Use

Follow these steps when measuring the pH of a sample:

1. If measuring temperature, record temperature prior to measuring pH.
2. Immerse the probe in the sample, keeping it away from the sides and bottom of the container. Allow the probe to equilibrate with the sample material.
3. With the probe suspended away from the container surface, record the pH.
4. Rinse the probe with analyte-free water and store in a container filled with analyte-free

water until the next sample is ready.

5. Record results to the nearest 0.1 Standard Unit (SU).

Storage

After use, rinse the unit with fresh water or Alconox®, followed by fresh water, at contaminated sites. Leave a small amount (20mL) of pH 4 solution in the storage cup before sealing the unit in order to keep the pH sensor moist during storage.

Dissolved Oxygen (DO): The membrane/electrode (ME) is the most commonly used instrument for measuring the dissolved oxygen present in a sample.

Calibration

Calibrate the DO probe according to the manufacturer's instructions, either in air-saturated water, or in a water-saturated air environment.

Maintenance

The DO probe should be inspected regularly and prior to use for damage and function. The membrane of the DO meter should be inspected for air bubbles, holes, and dryness. If the membrane is dry, replace and soak it in analyte-free water prior to calibration of the meter. If the metallic sensor is discolored, or does not appear shiny, use the fine-grit sandpaper (supplied with the DO sensor replacement kit) and buff the metal surface in a circular pattern until the surface shines. Rinse the sensor with deionized water before installing a new membrane.

Use

When measuring DO in situ with a field probe, follow these steps:

1. Allow the DO reading to stabilize.
2. Read the dial to the nearest 0.1 mg/L, and record the measurement.

Oxygen Reduction Potential (ORP): ORP, also known as redox potential, is the tendency of a chemical species to acquire electrons and thereby be reduced. Each species has its own intrinsic reduction potential; the more positive the potential, the greater the species' affinity for electrons and tendency to be reduced.

Calibration

Calibrate the ORP probe according to the manufacturer's instructions in a standardized calibration solution. The ORP is affected by temperature. Refer to the calibration solution or operations manual to correct for temperature during calibration.

Maintenance

The ORP probe should be inspected regularly and prior to use for damage and function.

Use

When measuring ORP in situ with a field probe, follow these steps:

1. Immerse the probe in the sample, keeping it away from the sides and bottom of the container. Allow the probe to equilibrate with the sample material.
2. With the probe suspended away from the container surface, record the ORP to the nearest 1.0 millivolt.
3. Rinse the probe with analyte-free water and store in a container filled with analyte-free water until the next sample is ready. Do not store the unit in deionized water.

Turbidity Meter: A nephelometer/turbidmeter is used to measure the turbidity of a liquid sample by determining how much light can pass through it. The Hach® Turbidimeter is the most commonly used commercially available meter for measuring the turbidity of a sample. Turbidity is measured in nephelometric turbidity units (NTUs).

Calibration

Calibration of turbidity meters will be performed in accordance with manufacturer's instructions. Any turbidity meter must be calibrated at both the beginning and end of the day during use in the field, and results will be recorded in a field logbook. The following procedures will be used to calibrate a turbidity meter in the field:

1. Turn the meter "ON" and allow 2 minutes for the lamp to stabilize.
2. Rinse the sample cell with organic-free or deionized water.
3. To "zero" the calibration, fill the cell to the fill line with organic-free or deionized water and then cap the cell.
4. Use lens paper to wipe off excess water and streaks from the outside of the cell.
5. Open the cover and insert the cell (arrow to the front) into the unit and close the cover.
6. Press "Blank" and wait for the "light bulb" icon to go off. Record the reading.
7. Hach turbidity meters require calibration with known standards. Refer to the operations manual for information on calibrating the meter.
8. Using the Gelex Turbidity Standards, repeat steps 4, 5, and 6. Record all findings.

Maintenance

Turbidity meters should be inspected regularly and prior to use for damage and function. During use, periodic checks should be performed using the standards to ensure continued proper calibration of the instrument. If error codes appear on the unit display, refer to the owner's manual to resolve the error.

Use

Follow these steps to measure the turbidity of a sample:

1. Pour sample material into the cell to the fill line and replace the cap on the cell.
2. Wipe excess water and any streaks from the outside of the cell with lens paper.
3. Place the cell inside the measurement chamber with the arrow towards the front and close the cover.
4. Press "READ" and wait for the "light bulb" icon to turn off
5. Record the reading.
6. Empty the cell and rinse with organic or analyte-free water.

Quality Control: The following procedures apply:

- Equipment will be operated and used in accordance with the manufacturer's instructions, unless otherwise specified in the site-specific work plan or its equivalent.
- Equipment examination activities will occur prior to field deployment, and they should be documented.

Calculations and Data Reduction: Does not apply.

Data Management and Records Management: Equipment calibration and maintenance records will be generated and maintained as prescribed in the governing QAPPs.

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BRISTOL ENVIRONMENTAL REMEDIATION SERVICES, LLC

EQUIPMENT DECONTAMINATION

STANDARD OPERATING PROCEDURE BERS-05

Record of Changes

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1	10/14/09	B. Allen	L. Maserjian
2	2/23/10	L. Maserjian	B. Allen

EQUIPMENT DECONTAMINATION

STANDARD OPERATING PROCEDURE

Summary: Disposable tools and equipment should be used when possible. However, where non-disposable items are used, appropriate decontamination will be accomplished according to the type of equipment being used and the type of samples being collected. In general, field equipment will be decontaminated by means of the following steps:

1. Perform non-phosphate detergent and tap water wash, using a brush if necessary.
2. Perform tap-water rinse.

When sampling for trace organic compounds, the following step will be added:

3. Perform deionized/distilled water rinse.

Health and Safety: Field activities should only be conducted in accordance with an approved Site Health and Safety Plan. Decontamination hazards and precautions include the following:

- Hazardous substances may be incompatible with decontamination materials. For example, the decontamination solution may react with contaminants to produce heat, explosion, or toxic products. Also, vapors from decontamination solutions may pose a direct health hazard to workers by inhalation, contact, fire, or explosion. The Site Health and Safety Plan will provide procedures and identify responsibilities to ensure that incompatible materials are identified and segregated from each other.
- The Site Health and Safety Plan will specify the use of personal protective equipment (PPE) that is appropriate for both the contaminants of concern and the decontamination chemicals used. The PPE selection will take into account that decontamination materials may degrade protective clothing or equipment, and that some solvents can permeate protective clothing.
- Solvent rinsing operations will be performed in well-ventilated areas.
- Investigation-derived waste (IDW) generated from decontamination activities will be managed as prescribed in SOP BERS-09: *IDW Management.*
- Material Safety Data Sheets (MSDS) will be kept with all decontamination solvents or solutions as required by the Hazard Communication Standard.
- Phosphate-containing detergents will not be used in jurisdictions where they are banned.

Interferences and Potential Problems: Potential problems related to equipment decontamination can be eliminated by the use of appropriate materials, reagents, and techniques.

- The use of distilled and/or deionized water commonly available from commercial vendors may be acceptable for decontamination of sampling equipment.

- The use of an untreated potable water supply is not an acceptable substitute for tap water. Tap water may be used from any municipal or industrial water treatment system.
- If acids or solvents are utilized in decontamination, they raise health and safety and waste disposal concerns.
- Washing complex and sophisticated sampling equipment with acids or solvents can damage the equipment.
- If not used immediately, cleaned equipment will be stored to prevent recontamination.
- PVC and plastic items will not be rinsed with solvents.

Personnel Qualifications: Field personnel will be trained and certified as hazardous site workers per Title 29 Code of Federal Regulations, Part 1910.120(e) [29 CFR 1910.120(e)]. If applicable, additional qualification requirements will be specified in the site Quality Assurance Project Plan (QAPP).

Equipment Requirements: Prior to deployment in the field, the requisite sampling equipment and materials will be identified, secured, and inspected for signs of damage or potential contamination. Decontamination equipment, materials, and supplies are generally selected based on availability. Other considerations include the ease of decontaminating or disposing of the equipment.

The following standard materials and equipment are recommended for decontamination activities:

- Non-phosphate detergent.
- Tap water.
- Distilled/deionized water
- Pesticide grade solvent
- Long- and short-handled brushes
- Bottle brushes
- Drop cloth/plastic sheeting
- Paper towels
- Plastic or galvanized tubs or buckets
- Pressurized sprayers (H_20)
- Solvent sprayer with Teflon nozzle
- Aluminum foil
- Plastic sheeting

- PPE
- Trash bags
- Trash containers
- 55-gallon drums
- Metal/plastic buckets/containers for storage and disposal of decontamination solutions.

The appropriate materials and equipment will be selected as needed on a site-specific basis.

Planning Considerations: Equipment decontamination activities, including those performed by subcontractors and suppliers, will be planned in advance of field activities and in consultation with program health and safety personnel.

Decontamination: Depending on the nature of the work, field equipment requiring decontamination may include heavy equipment, downhole equipment, sampling equipment, and groundwater pumping equipment.

Heavy Equipment Decontamination: Heavy equipment includes the drilling rig and backhoe. Field personnel will implement the following steps to decontaminate heavy equipment:

1. Set up a decontamination pad that is large enough to fully contain the equipment to be cleaned. Use one or more layers of heavy plastic sheeting to cover the ground surface.
2. Spray areas of the equipment that may have been exposed to contaminated soils using steam or high-pressure sprayer and detergent. Be sure to spray down all surfaces, including the rear area of the undercarriage.
3. Rinse the equipment with potable water.
4. Remove equipment from the decontamination pad and allow to air dry.

Downhole Equipment Decontamination: Downhole equipment includes hollow-stem augers and drill pipes. Well casings and screens will be decontaminated as decribed under "Sampling Equipment". Field personnel will implement the following steps to decontaminate downhole equipment:

1. Set up a centralized decontamination area, if possible. This area should be set up to contain contaminated rinse waters, and to minimize the spread of airborne spray.
2. Set up a "clean" area upwind of the decontamination area to receive cleaned equipment for air drying. At minimum, clean plastic sheeting must be used to cover the ground, tables, or other surfaces where decontaminated equipment is to be placed.
3. Wearing the required PPE, use a high-pressure sprayer or steam unit and detergent to clean the contaminated equipment. Aim downward to avoid spraying outside the decontamination area. Be sure to spray inside corners and gaps. If necessary, use a brush to dislodge dirt or debris.

4. Rinse the equipment using potable water.
5. Remove the equipment from the decontamination area and place in the clean area to air dry.
6. Cover the equipment to prevent contamination if the equipment is not used immediately.
7. Collect all contaminated waters, plastic sheeting, and disposable gloves, boots, and clothing in the designated containers. Receptacles containing contaminated items must be properly labeled for disposal. Containerize liquids and solids separately.

Sampling Equipment Decontamination: Sampling equipment includes split spoon samplers, spatulas, compositing bowls, and other utensils that come into direct contact with samples.

Field personnel will collect disposable sampling equipment in the designated containers and dispose of them as prescribed in the Site Health and Safety Plan and SOP BERS-09: *IDW Management.* Field personnel will implement the following steps to decontaminate non-disposable equipment:

1. Set up a decontamination line on plastic sheeting. The decontamination line should progress from dirty to clean, and end with an area for drying decontaminated equipment. At minimum, use clean, plastic sheeting to cover the ground, tables, or other surfaces on which decontaminated equipment will be placed. Set up a containment system for collecting wash/rinse waste.
2. Wash the item thoroughly in a bucket of soapy water. Use a stiff-bristle brush to dislodge dirt or debris. Before washing, disassemble items that might trap contaminants internally. Do not re-assemble until decontamination is complete.
3. Rinse the item in potable water. Rinse water should be replaced as needed, generally when cloudy.
4. Allow to air dry.
5. Collect all contaminated waters, plastic sheeting, and disposable gloves, boots, and clothing in the designated containers. Receptacles containing contaminated items must be properly labeled for disposal. Liquids and solids must be drummed separately.

Groundwater Sampling Pumping Equipment Decontamination: Field personnel will implement the following steps to decontaminate sampling pumps:

1. Set up a decontamination area and a separate clean storage area using plastic sheeting to cover the ground, tables, and other porous surfaces where decontaminated equipment will be placed. Set up three clean containers of the appropriate size and shape for immersing the pump assembly. Fill the first container with dilute, non-foaming soapy water, and the second with potable water. Use the third container for waste discharge.

2. If decontaminating an electric submersible pump (e.g., Grundfos® Redi-Flo), remove the bottom screw plug to flush the cooling water. Replace this water with deionized water after the decontamination process is complete.
3. Set up the pump assembly in the same configuration as used for sampling. Submerge pump intake and all downhole wetted parts (tubing, piping, and foot valve) in the soapy water container. Place the discharge outlet in the waste container above the level of wastewater. Pump soapy water through the pump assembly until it discharges to the waste container.
4. Move the pump assembly to the rinse water container while leaving discharge outlet in the waste container. Ensure that all downhole wetted parts are immersed in the potable water rinse. Pump potable water through the pump assembly until it runs clear.
5. Pump a sufficient amount of analyte-free water through the hose to flush out the tap water, then purge with the pump in reverse mode. Rinse the outside of the pump using analyte-free water. Decontaminate the discharge outlet by hand following the steps for decontamination of sampling equipment.
6. Remove the decontaminated pump assembly to the clean area and allow to air-dry.
7. Cover intake and outtake orifices with aluminum foil to prevent the entry of airborne contaminants or particles.
8. Place pump in clean plastic bag.

Quality Control: The following procedures apply:

- Equipment will be operated and used in accordance with the manufacturer's instructions, unless otherwise specified in the site-specific work plan or its equivalent.
- Equipment examination activities should occur prior to field deployment, and should be documented.
- After decontamination activities, the field personnel should make a record of the equipment type, date, time, and method of decontamination in the field logbook.
- If sampling equipment requires the use of plastic tubing, dispose of it as contaminated. Replace with clean tubing before conducting additional sampling.

Calculations and Data Reduction: Does not apply.

Data Management and Records Management: Generate and maintain decontamination records as prescribed in the governing QAPPs.

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BRISTOL ENVIRONMENTAL REMEDIATION SERVICES, LLC

WATER LEVEL MEASUREMENT

STANDARD OPERATING PROCEDURE BERS-08

Record of Changes

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0	01/15/08	B. Allen	S. Ruth
1	2/23/10	M. Faust	B. Allen

WATER LEVEL MEASUREMENT

STANDARD OPERATING PROCEDURE

Purpose and Scope: The purpose of this document is to provide sufficient and appropriate instructions for the determination of the depth-to-water and floating chemical product (i.e., gasoline, kerosene) in an open borehole, cased borehole, monitoring well, or piezometer.

Summary: Prior to measurement, water levels in piezometers and monitoring wells are allowed to stabilize for a minimum of 24 hours after well construction and development. A survey mark is placed on the casing for use as a reference point for measurement. The distance from water surface to reference point on well casing is measured at least twice and recorded.

Health and Safety: Field activities should only be conducted in accordance with an approved Site Health and Safety Plan.

Interferences and Potential Problems: Generally, water level measurements taken in boreholes, piezometers, or monitoring wells are used to construct water table or potentiometric surface maps, and to determine flow direction, as well as many other aquifer characteristics. Situations that may impact the accuracy of water level measurements include:

- The magnitude of the observed changes between wells appears too large;
- Atmospheric pressure changes;
- Aquifers that are tidally influenced;
- Aquifers affected by river stage, impoundments, and/or unlined ditches;
- Aquifers stressed by intermittent pumping of production wells;
- Aquifers being actively recharged due to precipitation event;
- Occurrence of pumping; and
- During storm events over a shallow aquifer where recharge is rapid.

Additional sources of error may include the following:

- The chalk used on steel tape may contaminate the well.
- Cascading water may obscure the water mark, or cause it to be inaccurate.
- Many types of electric sounders use metal indicators at 5-foot intervals around a conducting wire. To ensure accuracy, these intervals should be checked with a survey tape (preferably with units divided in hundredths of a foot).

- If there is product or oil present on the water, it can insulate the contacts of the probe on an electric sounder, or give false readings due to thickness of the oil. If this situation is suspected, it is recommended that interface probes be used to determine the thickness and density of the oil layer in order to determine the correct water level.
- Turbulence in the well and/or cascading water can make water level determination difficult with either an electric sounder or steel tape.

Personnel Qualifications: Field personnel will be trained and certified as hazardous site workers per Title 29 Code of Federal Regulations, Part 1910.120(e) [29 CFR 1910.120(e)]. If applicable, additional qualification requirements will be specified in the site-specific Quality Assurance Project Plan (QAPP) and will be met.

Equipment and Materials: Prior to deployment in the field, the requisite sampling equipment and materials will be identified, secured, and inspected for signs of damage or potential contamination.

There are a number of devices that can be used to measure water levels. The device must be capable of attaining an accuracy of 0.02 feet, and calibrated on a regular basis.

Field equipment for performing water level measurements include:

- Air monitoring equipment (e.g., photoionization detector [PID] or flame ionization detector [FID])
- Well depth measurement device
- Electronic water level indicator
- Metal tape measure
- Chalk
- Ruler
- Watch
- Logbook
- Paper towels
- Groundwater water level data forms
- pH meter (optional)
- Specific conductivity meter (optional)
- Thermometer (optional).

Site Preparation: The following steps will be followed before measurement activities are performed:

- Determine the extent of the sampling effort, the sampling methods to be employed, and the types and amounts of equipment and supplies needed.
- Obtain necessary sampling and monitoring equipment.
- Decontaminate or pre-clean equipment, and ensure that it is in working order.
- Perform a general site survey prior to site entry in accordance with the Site-Specific Health and Safety Plan.
- Identify and mark all sampling locations.

Water Level Measurement: A survey mark should be placed on the north side of the casing for use as a reference point for measurement. Generally, the reference point is marked on the top of the well casing, and is established at the time the well is surveyed. The measuring point should be documented in the site logbook and on a groundwater level data form. Every attempt should be made to notify future field personnel of such reference points in order to ensure comparable data and measurements.

Prior to measurement, water levels in piezometers and monitoring wells should be allowed to stabilize for a minimum of 24 hours after well construction/development. In low-yield situations, recovery may take longer. Measurements should be made to the closest 0.01 feet.

The following procedures will be followed to determine groundwater elevation:

1. Make sure that water level measuring equipment is in good operating condition.
2. To the extent known, measure wells in order of increasing contamination.
3. Clean all equipment entering the well.
4. Remove locking well cap, note well ID, time of day, elevation (top of casing) and date in site logbook or an appropriate groundwater level data form.
5. Remove well casing cap.
6. If required by site-specific conditions, monitor headspace of well with a PID or FID to determine presence of volatile organic compounds, and record in site logbook.
7. Lower electric water level measuring device or equivalent into the well until water surface is encountered.
8. Measure the distance from the water surface to the reference measuring point on the well casing or protective barrier post, and record in the site logbook. In addition, note that the water level measurement was from the top of the steel casing, the top of the PVC riser pipe, the ground surface, or some other position on the wellhead.
9. Groundwater level data should be documented as follows:
    - Logger Name – Person taking field notes;
    - Site Name;

- Date the water levels are measured;
- Location – Monitor well number and physical location;
- Time (24-hour clock) at which the water level measurement was recorded;
- Depth to Water – Water level measurement in feet, tenths, or hundredths of feet, depending on the equipment used. Two measurements are required to ensure accuracy;
- Comments – Any information the field personnel deems applicable may be included here;
- Measuring Point – Marked measuring point on PVC riser pipe, protective steel casing, or concrete pad surrounding well casing, from which all water level measurements for individual wells should be measured. This provides consistency in future water level measurements.

10. Measure total depth of well (at least twice to confirm measurement) and record in field logbook or on groundwater level data form.
11. Remove all downhole equipment; replace well casing cap and locking steel caps.
12. Rinse all downhole equipment and store for transport to next well.
13. Decontaminate all equipment.
14. Note any physical changes, such as erosion or cracks in protective concrete pad or variation in total depth of well, in field logbook and on groundwater level data form.

Quality Control: The following procedures apply:

- Equipment will be operated and used in accordance with the manufacturer's instructions, unless otherwise specified in the site-specific work plan or its equivalent.
- Equipment examination activities should occur prior to field deployment, and they should be documented.
- Each well should be tested at least twice in order to compare results.

Calculations and Data Reduction: Calculations and data reduction will be performed using the following equations and rules:

Groundwater elevation above mean sea level: $E_w = E - D$

where:

E_w = Elevation of water above mean sea level or local datum (feet or meters)

E = Elevation above sea level or local datum at point of measurement (feet or meters)

D = Depth to water (feet or meters)

BRISTOL ENVIRONMENTAL REMEDIATION SERVICES, LLC

INVESTIGATION-DERIVED WASTE (IDW) MANAGEMENT

STANDARD OPERATING PROCEDURE BERS-09

Record of Changes

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0	01/15/09	B. Allen	L. Maserjian
1	02/23/10	L. Maserjian	B. Allen

IDW MANAGEMENT

STANDARD OPERATING PROCEDURE

Summary: Investigation-derived waste (IDW) includes any material discarded after use during a field investigation at a hazardous waste site, and it includes personal protective equipment (PPE), disposable equipment, such as sampling equipment, drilling mud, soil cuttings, purge, or well-development water. IDW is classified as either hazardous or nonhazardous, depending on the properties of the waste. Whenever feasible, all IDW will be disposed of on site at active facilities.

If IDW is suspected to be hazardous, the material will be tested for proper classification. If the test determines the material to indeed be hazardous, it will be stored on site no longer than 90 days and then disposed of at a permitted treatment or disposal facility. Alternatively, it will be placed in the facility's waste treatment system, if appropriate. Whenever possible, nonhazardous IDW will be disposed of in the facility's Dumpster, waste treatment system, or on the ground in or near the source area, as appropriate. If on-site disposal is not feasible, nonhazardous IDW will be disposed of in a Dumpster or landfill.

Health and Safety: Field activities should only be conducted in accordance with an approved Site Health and Safety Plan.

Interferences and Potential Problems: Care should be taken to ensure segregation of hazardous 1DW from nonhazardous materials. The volume of spent solvent generated from field equipment decontamination procedures should be kept to a minimum, by applying only the minimum amount of solvent necessary and capturing it separately from the wash water. All hazardous waste will be containerized. Project planning will address procedures and responsibilities for the proper handling and disposal of project IDW.

Personnel Qualifications: Field personnel will be trained and certified as hazardous site workers per Title 29 Code of Federal Regulations, Part 1910.120(e) [29 CFR 19 10.120(e)]. If applicable, additional qualification requirements will be specified in the site Quality Assurance Project Plan (QAPP) and will be met.

Equipment and Materials: Prior to deployment in the field, the materials necessary for the management of IDW wastes in the field, such as 55-gallon drums and 5-gallon buckets, will be identified and secured.

Types of IDW: Materials which may become IDW include, but are not limited to, the following:

- PPE, including disposable coveralls, gloves, booties, respirator canisters, splash suits, etc.

- Disposable equipment, including plastic ground and equipment covers, aluminum foil, conduit pipe, composite liquid waste samplers, tubing, and broken or unused sample containers, sample container boxes, or tape, etc.
- Soil cuttings from drilling or hand augering activities.
- Drilling mud or water used for water rotary drilling.
- Groundwater obtained through well development or well purging.
- Cleaning fluids, such as spent solvents and wash water.

Management of Hazardous IDW: The site QAPP will specify disposal practices for hazardous or suspected hazardous IDW. If appropriate, these wastes will be disposed of on site by placement into the facility's waste treatment system, or they will be disposed of in the source area from which they originated, if doing so does not endanger human health or the environment. If on-site disposal is not possible, appropriate tests will be performed to characterize the waste for proper disposal. If the wastes are determined to be hazardous, they will be properly contained and labeled, and then stored on site for a maximum of ninety days before they are manifested and shipped to a permitted treatment or disposal facility.

The generation of hazardous IDW will be kept to a minimum. Nonhazardous materials will be segregated from hazardous materials to prevent cross-contamination. The most commonly produced type of IDW will probably be spent solvent from decontamination procedures and purged groundwater. Segregating the solvent from the wash water during equipment decontamination procedures will minimize the volume of spent solvent IDW generated during field activities.

Field personnel will implement the following procedures when managing hazardous IDW from specific practices:

- Disposable PPE – Containerize in 5-gallon bucket with tight-fitting lid. Identify and leave on site with permission of site operator. Otherwise, arrange for proper off-site disposal.
- Reusable PPE – Decontaminate following procedures described in the SOP BERS-05: *Equipment Decontamination*. Otherwise, follow procedures for disposable PPE.
- Spent Solvents – Containerize in original containers with contents clearly identified. Leave on site with permission of site operator.
- Soil Cuttings – Containerize in 55-gallon drum with a tight-fitting lid. Identify and leave onsite with permission of site operator.
- Groundwater – Containerize in 55-gallon drum with a tight-fitting lid. Identify and leave on site with permission of site operator. Otherwise, arrange for testing and proper off-site disposal.

- Decontamination Water – Containerize in 55-gallon drum with a tight-fitting lid. Identify and leave on site with permission of site operator. Otherwise, arrange for testing and proper off-site disposal.
- Disposable Equipment – Containerize in 55-gallon drum or 5-gallon bucket with a tight-fitting lid. Identify and leave on site with permission of site operator. Otherwise, arrange for testing and proper off-site disposal.

Management of Nonhazardous IDW: The site QAPP will specify disposal practices for nonhazardous IDW. If the waste site is active, permission will be sought from the site operator for on-site disposal of nonhazardous PPE, disposable equipment, and/or paper/cardboard wastes in the facility's Dumpsters. If on-site disposal is not feasible, the materials will be taken to a nearby permitted landfill.

If the facility is active, permission will be sought to place nonhazardous IDW, including drill cuttings, purge or well-development water, decontamination wash water, and drilling mud, etc., in the facility's waste treatment system. When appropriate, nonhazardous drill cuttings will be spread around the borehole, or, if they were removed for a temporary well, they will be placed back into the borehole. Otherwise, cuttings, purge water, and development water will be placed in a pit in or near the source area. Nonhazardous monitoring well purge or development water may also be poured onto the ground downgradient of the monitoring well. Purge water from functioning private potable wells will be discharged directly onto the ground surface. If on-site disposal is not feasible, these items will be placed into a unit with an environmental permit, such as a landfill or sanitary sewer. These types of materials will not be placed in Dumpsters.

Field personnel will implement the following procedures when managing nonhazardous IDW from specific practices:

- Disposable PPE – Place waste in double bag, and place in site Dumpster, with permission of site operator. Otherwise arrange for testing and disposal.
- Reusable PPE - Decontaminate following procedures described in the SOP BERS-05: *Equipment Decontamination.*
- Soil Cuttings – Containerize in 55-gallon drum with a tight-fitting lid. Identify and leave on site with permission of site operator. Otherwise, arrange for testing and disposal.
- Groundwater – Containerize in 55-gallon drum with a tight-fitting lid. Identify and leave on site with permission of site operator. Otherwise, arrange for testing and disposal.
- Decontamination Water – Containerize in 55-gallon drum with a tight-fitting lid. Identify and leave on site with permission of site operator. Otherwise, arrange for testing and disposal.
- Disposable Equipment – Containerize in 55-gallon drum or 5-gallon bucket with tight-fitting lid. Identify and leave on site with permission of site operator. Otherwise, arrange for testing and disposal.

- Trash – Place waste in double bag, and place in site Dumpster with permission of site operator. Otherwise, arrange for proper disposal.

Quality Control: The following procedures apply:

- Proper handling and disposal activities will be planned prior to commencement of field activities. All planning decisions will be documented in the site QAPP.
- IDW will be handled, stored, and disposed of in accordance with the site QAPP and relevant facility plans.

Calculations and Data Reduction: N/A

Data Management and Records Management: Records concerning the management of IDW will be generated and maintained as prescribed in the governing QA plans.

BRISTOL ENVIRONMENTAL REMEDIATION SERVICES, LLC

FIELD DOCUMENTATION

STANDARD OPERATING PROCEDURE BERS-11

Record of Changes

Revision No.	Date	Prepared by	Approved by
0	01/05/10	L. Maserjian	B. Allen

FIELD DOCUMENTATION

STANDARD OPERATING PROCEDURE

Method Summary: To ensure the quality and integrity of field and analytical data, field activities will be documented in the project field notebook. In the event that more than one person is working on the site and performing different activities, more than one field notebook will be designated for the site. When the field notebook is filled, a new notebook will be started. Pertinent protocols for documenting field activities are provided below.

Notebook Cover: The cover of each field notebook will contain the following information:

- Job title
- Job number
- Name of company
- Name of personnel in charge of notebook
- Date of field activities covered in the notebook.

First Page of Each Day: The following information must be provided in the beginning of each day of work:

- Job title
- Names of all personnel on site
- Weather conditions
- Location, if multiple sites
- Health and Safety meeting notes.

Each Page of Notebook: The following information must be provided on each page of the field notebook:

- Date
- Initials or signature of person taking notes (bottom of page)
- Location, if you have changed during the day
- Page number, if not on the notebook.

Required General Information for Field Notebooks:

- Do not erase mistakes/errors – draw a line through the deletion and initial it.
- Do not leave pages blank. If a page is skipped, draw a diagonal line across the page and initial the line.
- Record persons arriving and leaving site (guests to site, clients, regulatory agency personnel).
- Record health and safety issues that arise (close calls or accidents should also be documented on required forms).
- Note photographs taken and direction in which photograph was taken.
- Take an overview photograph of site before digging/drilling, etc.
- Include a photograph of the site after it is restored (if applicable).

Required Documentation for Sample Collection Activities:

- Instrument name;
- Calibration record (when, by whom, results, gas type);
- Sampling location map with North arrow (field-screening and analytical samples);
- Sample ID, with description of soil material;
- Duplicate information;
- Sample time, each sample;
- Sample depth;
- List what analyses sample will be analyzed for;
- Field-screening measurements;
- Type of machinery used if not already recorded on field forms (Macro-Core sampler, split spoon, pumps, sampling meters);
- If Global Positioning System (GPS) is used, make note of where it was used;
- Delivery or pick-up information (airway bill #, Fed Ex tracking #, Fed Ex pick up information).

Required Documentation for Underground Storage Tank (UST)/Aboveground Storage Tank (AST) Removal Activities:

- UST or AST dimensions;
- Dimensions of tank excavations, depth to groundwater, and depth of excavation;

- Footage of fuel piping (how many feet from dispenser to tanks);
- Where vent lines, fill ports, dispensers and pipe runs are located;
- Location of piping joints;
- Amount of sludge/water removed from tanks prior to decommissioning;
- Amount of contaminated soil/media (cubic yards of stockpiles);
- Amount of contaminated soil or debris hauled from site (number of truckloads);
- Amount of clean fill brought to the site;
- Type of machinery used.

Required Documentation for Monitoring Well/Soil Boring Activities (This list does not include the documentation that will be provided on a boring log and groundwater sample collection form.):

- Always collect swing-tie measurements to monitoring wells (even if you have a GPS);
- If drillers add water during well installation, note how much was added;
- Well screen slot size;
- Well filter sand pack size;
- Depth of top and bottom of well screen;
- Total depth of well;
- Amount of well construction materials used for each well (e.g., bags of silica sand, concrete, amount of screened casing, and amount of blank casing);
- Location of sand filter pack, bentonite seal, and grout used;
- Amount of water removed during development (unless you are using a well development form);
- Drill rig type;
- Changes in level of the water table/ aquifer.

Interferences and Potential Problems: Improper documentation of field activities may result in a number of problems, including, but not limited to:

- Inability to find sample collection locations that is needed for maps or finding areas for further assessment/excavation;
- Inability to create an as-built map;
- Inability to legally support data due to poor documentation;

- Development of erroneous conclusions regarding site contamination based on inaccurate data and/or problems correlating data and sample locations at the site;
- Difficulty in writing thorough reports due to poor documentation.

BRISTOL ENVIRONMENTAL REMEDIATION SERVICES, LLC

DOCUMENT CONTROL SYSTEM

STANDARD OPERATING PROCEDURE BERS-15

Record of Changes

Revision No.	Date	Prepared by	Approved by
0	01/14/10	L. Pheasant	P. Curl
1	08/14/14	L. Pheasant	P. Curl

DOCUMENT CONTROL SYSTEM

When preparing a report, plan, or client deliverable, schedule the formatting and editing of the document with Document Services. If, at any time, you have questions about where your document is in the process, the Document Production Lead will be able to assist you and answer any questions you may have.

At a minimum, a discussion between the Project Manager (PM) or Primary Author (PA) and the Document Services Team should take place to decide how the document should be processed. Mutual understanding about time/budget considerations, special needs, client requirements, reasons for deviations from the norm, etc., will prevent much frustration for author, editor, and Document Services Team.

Schedule work as far in advance of the client deadline as possible.

Document Production Checklist

When the document is ready for formatting and editing, complete a Document Tracking Sheet (green sheet) (Attachment 1), and email it to the Document Services Team. The Document Production Lead will add the deliverable to the schedule, located on the Intranet (http://intranet.beesc.org/marketingpub/default.aspx), where it can be tracked. The green sheet is the record of who reviewed the document, along with what was done and provides information on number of copies and distribution. The green sheet should be kept with the project files as a record of the document production.

Document Tracking

All documents must have specific deadlines. Once the document has been submitted, the Document Manager/Technical Editor will present it to the Document Production Lead for formatting. The document will then be given to the Editor. After the document has been edited, the Editor will notify the PM/PA that the document is available for review and acceptance/rejection of the redline changes. Once the PM/PA has reviewed the document, it will be returned to the Document Production Lead for a review of the formatting and reproduction.

The written content of the document must be at least 90 to 95 percent complete before submission to the Document Services Team. If there are sections to be added/changed after submitting it to the Document Services Team, submit them via email, in a separate document, and explain where the information is to be inserted. Do not make electronic changes to the document until it has been returned to you for review. If changes must be made, use Track Changes, so that the Editor knows which changes to review.

This precaution is taken to ensure that documents maintain their integrit y (particularly large documents), and that the Document Services Team is aware of any changes made after the document has been submitted.

The physical content of documents submitted for formatting/editing should be complete. This means all text, figures, forms, photographs, inserts, etc., must be provided. If the figures, photographs, tables, etc., are not ready, a placeholder must be inserted and edited when available.

Document Labeling and Location

The Document Production Lead will insert the file name and path in the footer on the last page of every document (font size will be 6 or 7 point). This will ensure that the document can be located at a later date/time. The contract number and Bristol job number will be inserted in the header of the document. An electronic copy of the final document will be placed in the project file on the Bristol computer network, which is backed up daily.

ATTACHMENT 1

Document Production Checklist

DOCUMENT TRACKING SHEET

Job No. ____________ Phase Code ______________ Job Name: ___________________________

Project Manager: ________________ Ext. ______ Primary Author ________________ Ext. ______

File Path: ____

Company: ☐ BESC ☐ BCS ☐ BDBS ☐ BERS ☐ BGC Other ____________________

Client Due Date: _______________ Time: _____________ Is this flexible? Yes ☐ No ☐

PM Due Date _______________ Time: _____________ Is this flexible? Yes ☐ No ☐

Please note if word processing/formatting and technical editing are under different phase codes:

DOCUMENT SERVICES

Approx. no. pages (double-spaced) ______ Edit ☐ Editor Comments ☐ Format ☐ Copies ☐

Total No. of Hard Copies (client/PM /field/file): _______ Is this a MED? ☐ Yes ☐ No

Binding will be comb-bound unless size dictates that it be in a 3-ring binder

Total No. of Electronic Copies: Number of CDs/DVDs: ______ PDF only ☐

Hours budgeted for formatting and editing _______ Overtime approved to meet deadline? ☐ Yes ☐ No

List/Provide Figures/Appendices/Attachments:

Reviewer(s) (please list)	**Type of Review** (Full, MED, Chemistry, etc.)	**Reviewer Initials**	**Date**

Notes/Comments:

____

____

____

BRISTOL ENVIRONMENTAL
REMEDIATION SERVICES, LLC

Anchorage, Alaska

U.S. ENVIRONMENTAL PROTECTION AGENCY

COLLECTION OF SUB-SURFACE AND SUB-SLAB VOCS AND SVOCS

STANDARD OPERATING PROCEDURE

Record of Changes

Revision no.	Date	Prepared by	Approved by
0	10/14/09	B. Allen	P. Curl

COLLECTION OF SUB-SURFACE AND SUB-SLAB VOCS AND SVOCS

STANDARD OPERATING PROCEDURE

This procedure describes the collection of sub slab and sub-surface soil vapor samples into Summa Canisters and XAD Cartridges and includes instructions for leak checking and gas sampling. This SOP should be used in conjunction with project data quality objectives.

1.0 MANIFOLD LEAK CHECK

1.1 MANIFOLD ASSEMBLY

Make sure the sampling system is assembled as shown in Figure 1 by connecting the sampling manifold to the soil gas probe and the purge system. Do not connect the flow controller or canister at this time.

1.2 MANIFOLD VALVES

Make sure the gas probe valve (valve #1) is closed.

1.3 VACUUM CHECK

Open the sample valve (valve #2) and the purge valve (valve #3) and turn the vacuum pump on. Make sure that the flow meter on the vacuum pump exhaust is reading 200 milliliters per minute. Let the pump run for 1 minute to allow purging of potential contaminants from the manifold.

1.4 APPLYING VACUUM

Close valve #2 to achieve a vacuum gauge reading of 10 inches of mercury or to the maximum vacuum that will be encountered during sampling, whichever is greater. Close purge valve #3 and shut the vacuum pump off.

1.5 MAINTAINING VACUUM

If the pressure in the manifold has not changed after one minute, then the manifold is considered leak free. If not, repair any leaks prior to use and re-check the manifold.

1.6 RECORDING THE LEAK CHECK

Record the leak check date, time, and gauges readings on the field sampling log.

2.0 SOIL GAS PROBE LEAK CHECK AND PROBE PURGING

2.1 LEAK CHECK METHODS

The sampling system needs to be leak-checked and purged before sampling. Two different methods are presented. One method uses helium gas as a tracer and allows for the assessment of potential probe leak prior to sample collection. The other method uses isopropyl alcohol as a tracer and allows for the assessment of potential probe leak after sample collection and analysis. Both of these methods are acceptable and are detailed below.

2.1.1 Helium Leak Checking Technique and Purge

Remove the probe seal insert, wrap the sampling union fitting threads with Teflon tape (wrap the National Pipe Tapered threads only), and tighten into the exposed probe fitting. Thread the Teflon sample tubing through the rubber grommet in the leak check hood from the outside and attach the tube to the sampling valve. Slide the enclosure down so it seals on the concrete slab or soil surface. Attach the other end of the sample tube to the sample manifold.

Attach tubing to the flow meter on the helium tank regulator and the other end to the enclosure. Attach the exhaust tube to the enclosure and position the other end as far away as possible to avoid detection by the helium leak detector.

Put the helium detector on the exhaust line from the sample pump. Make sure valve #1 is closed. Open valves #2 and #3. Turn on the sample pump and helium detector.

Open the helium tank and set the flow meter for approximately 200 ml/min. Allow it to flow for 1 minute to fill the leak check enclosure before starting the purge. Make sure that the detector is not reading any helium before starting the purge.

Two liters of soil gas need to be purged before sampling. The purge time is 10 minutes at a flow rate of 200 ml/min. Close valve #2 and open valve #1 simultaneously and start timing for the purge volume. During the purge, observe the helium detector for indication of probe leakage (e.g., infiltration of room air into the probe). If a reading of >10% is observed, then the probe leak check has failed, and corrective action is required.

At the end of the purge time, close valves #1 and #3 and turn the pump off. If at any time during the purge the detector read < 10%, then the system is leak free and ready for sampling. If >10% was observed, then check the fittings and try again. If <10% cannot be achieved, then this probe must be abandoned and a new hole drilled. Be sure to record the helium leak check value on the field sheet.

Close the helium tank valve.

2.1.2 Isopropyl Alcohol Leak Checking Technique and Purge

Moisten a paper towel with isopropyl alcohol. Wrap the isopropyl alcohol moistened paper towel around probe fittings at the slab surface. N ote: It is important to keep the isopropyl alcohol completely away from the sample equipment and SUMMA Canister during the set up phase. The sampler must also change nitrile gloves between setting up the sample equipment and conducting the leak detection test. It is also important to instruct the laboratory to analyze for isopropyl alcohol. If isopropyl alcohol is detected by the laboratory at a concentration greater than 5% (50,000 Parts Per Million by Volume) then the sample is deemed to be invalid due to a leak.

Two liters of sub slab gas need to be purged before sampling. The purge time is 10 minutes at a flow rate of 200 ml/min. Close valve #2 and open valve #1 simultaneously and start timing for the purge volume.

At the end of the purge time, close valves #1 and #3 and turn the pump off.

2.1.3 Soil Gas Purging Parameter Measurements

During purging, soil gas parameters can be measured. Parameters that can be measured include oxygen, carbon dioxide, methane, and Volatile Organic Compounds depending on project specific requirements. The appropriate instrument can be connected directly to the sampling manifold or a tedlar bag can be filled and the measurements taken from the tedlar bag.

3.0 SUMMA CANISTER SAMPLING

3.1 Maintaining Canister Vacuum

Care should be used at all times to prevent inadvertent loss of canister vacuum. Never open the valve affixed to the canister unless the intent is to collect a sample or check the pressure. Use only a canister that has been certified to be clean.

3.2 Recording Vacuum Pressure

Remove the canister valve cap, attach the vacuum gauge to the canister, and open the canister valve. Record the pressure reading and close and remove the valve. The vacuum in the canister should be between 28 and 30 inches of mercury. If not, then the canister has leaked and should not be used for sampling.

3.3 Connecting Summa Canister

Connect the flow controller to the manifold (at valve #2) and the Summa canister to the flow controller. The port on the flow controller that reads 'HP' or 'In' should be attached to the manifold. The port that reads 'LP' or 'Out' should be attached to the canister. Use only a flow controller that has been cleaned, calibrated and properly adjusted by the laboratory.

3.4 Sample Collection

To take the sample, confirm valve #3 is closed, and open valves #1 and #2. Slowly open the canister valve approximately one (1) full turn, and start timing. Record the start time on the field sampling log. During the sampling period, record the lowest pressure from the manifold gauge on the field log.

3.5 SAMPLE COLLECTION DURATION

Sample time and flow rate protocols are subject to project requirements.

For a 30 minute sample period into a 6 liter canister the flow controller is set to 200 ml/min. and it will take 30 minutes to collect a sample.

At the end of the sampling time, close the sample valve (valve #2) and the valve affixed to the canister. Remove the canister from the apparatus.

Re-attach the vacuum gauge and record the final pressure. The canister should only have a vacuum of between 2 and 5 inches of mercury in the canister. Record the sampling date, time, canister ID, flow controller ID, and any other observation pertinent to the sampling event on the field sampling log.

Remove the gauge from the canister and tighten the cap back on with a wrench. Verify that the canister valve is closed.

Fill out all appropriate documentation (sampling forms, sample labels, chain of custody, sample tags, etc.).

Disconnect the sample tubing from the probe, and remove the sampling union.

4.0 XAD SAMPLING

4.1 CONNECTING XAD TUBE

Following the collection of the Summa canister sample place the XAD tube in the sample manifold as shown on Figure 1.

4.2 SAMPLE COLLECTION

To take the sample, confirm valve #2 is closed, and open valves #1 and #3 and start timing. Record the start time on the field sampling log. During the sampling period, record the lowest pressure from the manifold gauge on the field log.

4.3 SAMPLE COLLECTION DURATION

Sample time and flow rate protocols are subject to project requirements.

APPENDIX B

Bristol Field Forms

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

Client:	
Job No:	

BOREHOLE ID:

Site Name:
Site Location:
Date Started: Completed:
Drill Rig: Drill Company:
Driller: Borehole Dia. (ft):
Logged By:
Company:
Sample Method: Total Depth:

Sketch Well Location:

Depth in Feet	Sample Interval	Blow Count	% Recovery	Sample ID	DESCRIPTION	PID (ppm)	WATER LEVEL	USCS	Estimated % Fines	Estimated % Sand	Estimated % Grave	REMARKS

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

GROUNDWATER LOW-FLOW PURGING FORM

Job Name ____________ Well No.: ____________

Job Number ____________ Well Type: ☐ Monitor ☐ Extraction ☐ Other ________

Company ____________ Well Material ☐ PVC ☐ St. Steel ☐ Other ________

____________ Date ____________ Time: ________

Purged by ____________ ____________

(Signature)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):

☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other ________

Total Depth of Casing (TD in feet BTOC): ________

Water Level Depth (WL in feet BTOC): ________

____

PURGE METHOD

☐ Pump – Type: ____________

☐ Submersible ☐ Centrifugal ☐ Bladder ☐ Peristaltic.

☐ Other – Type: ____________

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☐ Other

Depth in feet (BTOC): ________ Screen Interval in Feet (BTOC)

PURGE TIME

________ Start ________ Stop ________ Elapsed

PURGE RATE

Initial ________ gpm Final ________ gpm

ACTUAL PURGE VOLUME

________ gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	Water Depth below MP	Pump Dial	Purge Rate (ml/min)	T ☐ °C ☐ °F	Specific Cond. (μS/cm)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Cumulative Volume Purged

GROUNDWATER LOW-FLOW PURGING FORM (continued)

FIELD PARAMETER MEASUREMENT (Continued)

Minutes Since Pumping Began	Water Depth below MP	Pump Dial	Purge Rate (ml/min)	T ☐ °C ☐ °F	Specific Cond. (µS/cm)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Cumulative Volume Purged

GROUNDWATER SAMPLING FORM
(To Accompany Low-Flow Purging Form)

Bristol
ENVIRONMENTAL
REMEDIATION SERVICES, LLC

Job Name ______________________

Job Number ______________ Date ______________ Time: ______________

Recorded by ______________ Sampled by ______________
(Signature)

WELL INFORMATION

Well Number ______________ **Well Location** ______________

Casing Diameter (D in inches):

☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other ________

Total Depth of Casing (TD in feet BTOC):

Water Level Depth (WL in feet BTOC):

WELL SAMPLING

SAMPLING METHOD

☐ Bailer – Type: ______________ ☐ Grab – Type ______________

☐ Submersible ☐ Centrifugal ☐ Bladder ________ ☐ Other – Type: ______________

SAMPLING DISTRIBUTION

Sample No.	Volume	Analysis Requested	Preservatives	Lab	Comments

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of

Section A **Required** Client Information:

Company:	Bristol Environmental Remediation Svc
Address:	111 W 16th Ave. Third Floor
	Anchorage, AK 99501
Email To:	Julie Sharp-Dahl
Phone:	907-743-9394 Fax:
Requested Due Date/TAT:	**10 business days**

Section B **Required** Project Information:

Report To:	Julie Sharp-Dahl
Copy To:	Lesa Nelson
Purchase Order No.:	
Project Name:	Tower Standard LUST Site
Project Number:	BERS# 34160024; EPA TO 2012

Section C Invoice Information:

Attention:	Julie Sharp-Dahl
Company Name:	Bristol Environmental Remediation
Address:	See client info
Pace Quote Reference:	00019643
Pace Project Manager:	Tim Sandager
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: WI

Section D **Required** Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	EPA 524.2 VOCs	EPA 8011 EDB	EPA 6020 Lead only										Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1																																
2																																
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ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Report analytical results to the MDL										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: **DATE Signed (MM/DD/YY):**

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007

EPA-R5-2017-010506_0001476

SAMPLE LOG FOR SOIL GAS
(Sorbent Tube)

Vacuum Test			Helium Leak Test = <10% or 50,000 ppm = Failed						Sample ID: Date: Job No.				Sample by: QC = Time =	
Start Time	End Time	Vacuum Gauge Reading (—) PSI for 1 min.	Helium Added %	1st Helium Check (Reading from Tedlar Bag)	Pass/ Fail	Helium Added %	2nd Helium Check	Pass /Fail	Start Time	End Time	Sorbent Tube Type	Clean Date	Tube S/N	Pump S/N

Comments:

APPENDIX C

Indoor Air Quality Questionnaire

INDOOR AIR QUALITY QUETIONNAIRE AND BUILDING INVENTORY

Preparer's Name ______________________ Date/Time Prepared ______________

Preparer's Affiliation ______________________ Phone No. ______________

Purpose of Investigation ____

1. OCCUPANT:

Interviewed: ☐ Yes ☐ No

Last Name: ______________________ First Name: ______________

Address: ____

County: ____________ Home Phone: ____________ Office Phone: ____________

Number of Occupants/persons at this location ____________ Age of Occupants ____________

2. OWNER OR LANDLORD: (Check if same as occupant ☐)

Interviewed: ☐ Yes ☐ No

Last Name: ______________________ First Name: ______________

Address: ____

County: ____________ Home Phone: ____________ Office Phone: ____________

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other: ____________

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouse/Condos
Modular	Log Home	Other: ____________

If multiple units, how many: _________

If the property is commercial, type?

Business Type(s) ____________________

Does it include residences (i.e., multi-use)? ☐ Yes ☐ No If yes, how many? ________

Other characteristics:

Number of floors ____________ Building age ______________

Is the building insulated? ☐ Yes ☐ No How air tight? Tight / Average / Not Tight

4. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other ________
c. Basement floor:	concrete	dirt	stone	other ________
d. Basement floor:	uncovered	covered	covered with ________	
e. Concrete floor:	unsealed	sealed	sealed with ________	
f. Foundation walls:	poured	block	stone	other ________
g. Foundation wals:	unsealed	sealed	sealed with ________	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	☐ Yes	☐ No		
k. Water in sump:	☐ Yes	☐ No	not applicable	

Basement/Lowest level depth below grade: ________(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

____

____

5. HEATING, VENTING, AND AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard
Space Heaters	Stream radiation	Radiant floor
Electric baseboard	Wood stove	Outdoor wood boiler Other: ____________

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: ____________________

Boiler/furnace located in: Basement Outdoors Main Floor Other ____________

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? ☐ Yes ☐ No

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

____

____

____

____

6. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	
1st Floor	
2nd Floor	
3rd Floor	
4th Floor	

7. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?	Y / N	
b. Does the garage have a separate heating unit?	Y / N / NA	
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	Y / N / NA Please specify	____________
d. Has the building ever had a fire?	Y / N	When? ____________
e. Is a kerosene or unvented gas space heater present?	Y / N	Where? ____________

f. Is there a workshop or hobby/craft area?	Y / N	Where & What Type?	________
g. Is there smoking in the building?	Y / N	How frequently?	________
h. Have cleaning products been used recently?	Y / N	When & What Type?	________
i. Have cosmetic products been used recently?	Y / N	When & What Type?	________
j. Has painting/staining been done in the last 6 months?	Y / N	Where & When?	________
k. Is there new carpet, drapes or other textiles?	Y / N	Where & When?	________
l. Have air fresheners been used recently?	Y / N	When & What Type?	________
m. Is there a kitchen exhaust fan?	Y / N	If yes, where vented?	________
n. Is there a bathroom exhaust fan?	Y / N	If yes, where vented?	________
o. Is there a clothes dryer?	Y / N	If yes, is it vented outside?	Y / N
p. Has there been a pesticide application?	Y / N	When & What Type?	________
Are there odors in the building?	Y / N		

If yes, please describe: ________________________________

Do any of the building occupants use solvents at work? Y / N ________

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what type of solvents are used? ________________________________

If yes, are their clothes washed at work? Y / N ________

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)	No
Yes, use dry-cleaning infrequently (monthly or less)	Unknown
Yes, work at a dry-cleaning service	

Is there a radon mitigation system for the building/structure?	Y / N	Date of installation:
Is the system active or passive?	Active/Passive	

APPENDIX D

Pace Analytical Services, Inc.
Laboratory Certifications

Minnesota Department of Health
Environmental Laboratory Accreditation Program

Issues accreditation to

State Laboratory ID: 027-053-137

EPA Lab Code: MN00064

Pace Analytical Services, Inc - Mpls
1700 Elm Street SE, Suite 200
Minneapolis, MN 55414

for fields of accreditation listed on the laboratory's accompanying Scope of Certification in accordance with the provisions in Minnesota Laws and Rules.

Continued accreditation is contingent upon successful on-going compliance with Minnesota Statutes 144.97 to 144.98, 2009 TNI Standard and applicable Minnesota Rules 4740.2010 to 4740.2120. The laboratory's Scope of Certification cites the specific programs, methods, analytes and matrices for which MDH issues this accreditation.

This certificate is valid proof of accreditation only when associated with its accompanying Scope of Certification.

The Scope of Certification and reports of on-site assessments are on file at the Minnesota Department of Health, 601 Robert Street North, Saint Paul, Minnesota. Customers may verify the laboratory's accreditation status in Minnesota by contacting MNELAP at (651) 201-5324.

Effective Date: 09/26/2014
Expires: 12/31/2015
Certificate Number: 775830

Issued under the authority delegated by the Commissioner of Health, State of Minnesota

MINNESOTA MDH DEPARTMENT OF HEALTH

Environmental Laboratory Accreditation Program
Scope of Certification

THIS LISTING OF FIELDS OF ACCREDITATION MUST BE ACCOMPANIED BY CERTIFICATE NUMBER: 775830

State Laboratory ID: 027-053-137 EPA Lab Code: MN00064 Issue Date: 9/26/2014
Expiration Date: 12/31/2015

Pace Analytical Services, Inc - Mpls
1700 Elm Street SE, Suite 200
Minneapolis, MN 55414

Clean Air Act

EPA 3C

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA 3C	Carbon dioxide	AIR	MN	
CAA	EPA 3C	Carbon monoxide	AIR	MN	
CAA	EPA 3C	Methane	AIR	MN	
CAA	EPA 3C	Nitrogen	AIR	MN	
CAA	EPA 3C	Oxygen	AIR	MN	

EPA Method 23

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA Method 23	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	AIR	MN	
CAA	EPA Method 23	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	AIR	MN	
CAA	EPA Method 23	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	AIR	MN	
CAA	EPA Method 23	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	AIR	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA Method 23	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	AIR	MN	
CAA	EPA Method 23	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	AIR	MN	
CAA	EPA Method 23	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	AIR	MN	
CAA	EPA Method 23	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	AIR	MN	
CAA	EPA Method 23	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	AIR	MN	
CAA	EPA Method 23	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	AIR	MN	
CAA	EPA Method 23	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	AIR	MN	
CAA	EPA Method 23	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	AIR	MN	
CAA	EPA Method 23	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	AIR	MN	
CAA	EPA Method 23	2,3,4,6,7,8-Hexachlorodibenzofuran	AIR	MN	
CAA	EPA Method 23	2,3,4,7,8-Pentachlorodibenzofuran	AIR	MN	
CAA	EPA Method 23	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	AIR	MN	
CAA	EPA Method 23	2,3,7,8-Tetrachlorodibenzofuran	AIR	MN	

EPA RSK-175 (GC/FID)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA RSK-175 (GC/FID)	Ethane	AIR	MN	
CAA	EPA RSK-175 (GC/FID)	Ethene	AIR	MN	
CAA	EPA RSK-175 (GC/FID)	Methane	AIR	MN	
CAA	EPA RSK-175 (GC/FID)	n-Propane	AIR	MN	

EPA TO-13A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-13A	2-Methylnaphthalene	AIR	MN	
CAA	EPA TO-13A	Acenaphthene	AIR	MN	
CAA	EPA TO-13A	Acenaphthylene	AIR	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-13A	Anthracene	AIR	MN	
CAA	EPA TO-13A	Benzo(a)anthracene	AIR	MN	
CAA	EPA TO-13A	Benzo(a)pyrene	AIR	MN	
CAA	EPA TO-13A	Benzo(e)pyrene	AIR	MN	
CAA	EPA TO-13A	Benzo(g,h,i)perylene	AIR	MN	
CAA	EPA TO-13A	Benzo(k)fluoranthene	AIR	MN	
CAA	EPA TO-13A	Benzo[b]fluoranthene	AIR	MN	
CAA	EPA TO-13A	Chrysene	AIR	MN	
CAA	EPA TO-13A	Dibenz(a,h) anthracene	AIR	MN	
CAA	EPA TO-13A	Fluoranthene	AIR	MN	
CAA	EPA TO-13A	Fluorene	AIR	MN	
CAA	EPA TO-13A	Indeno(1,2,3-cd) pyrene	AIR	MN	
CAA	EPA TO-13A	Naphthalene	AIR	MN	
CAA	EPA TO-13A	Phenanthrene	AIR	MN	
CAA	EPA TO-13A	Pyrene	AIR	MN	

EPA TO-14A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-14A	1,1,1-Trichloroethane	AIR	MN	
CAA	EPA TO-14A	1,1,2,2-Tetrachloroethane	AIR	MN	
CAA	EPA TO-14A	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIR	MN	
CAA	EPA TO-14A	1,1,2-Trichloroethane	AIR	MN	
CAA	EPA TO-14A	1,1-Dichloroethane	AIR	MN	
CAA	EPA TO-14A	1,1-Dichloroethylene	AIR	MN	
CAA	EPA TO-14A	1,2,4-Trichlorobenzene	AIR	MN	
CAA	EPA TO-14A	1,2,4-Trimethylbenzene	AIR	MN	
CAA	EPA TO-14A	1,2-Dibromoethane (EDB, Ethylene dibromide)	AIR	MN	
CAA	EPA TO-14A	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-114)	AIR	MN	
CAA	EPA TO-14A	1,2-Dichlorobenzene	AIR	MN	
CAA	EPA TO-14A	1,2-Dichloroethane (Ethylene dichloride)	AIR	MN	
CAA	EPA TO-14A	1,2-Dichloroethene (total)	AIR	MN	
CAA	EPA TO-14A	1,2-Dichloropropane	AIR	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-14A	1,3-Dichlorobenzene	AIR	MN	
CAA	EPA TO-14A	1,4-Dichlorobenzene	AIR	MN	
CAA	EPA TO-14A	Benzene	AIR	MN	
CAA	EPA TO-14A	Benzyl chloride	AIR	MN	
CAA	EPA TO-14A	Bromomethane	AIR	MN	
CAA	EPA TO-14A	Carbon tetrachloride	AIR	MN	
CAA	EPA TO-14A	Chlorobenzene	AIR	MN	
CAA	EPA TO-14A	Chloroethane (Ethyl chloride)	AIR	MN	
CAA	EPA TO-14A	Chloroform	AIR	MN	
CAA	EPA TO-14A	cis-1,2-Dichloroethylene	AIR	MN	
CAA	EPA TO-14A	cis-1,3-Dichloropropene	AIR	MN	
CAA	EPA TO-14A	Dichlorodifluoromethane (Freon-12)	AIR	MN	
CAA	EPA TO-14A	Ethylbenzene	AIR	MN	
CAA	EPA TO-14A	Hexachloro-1,3-butadiene	AIR	MN	
CAA	EPA TO-14A	m+p-xylene	AIR	MN	
CAA	EPA TO-14A	Methyl chloride (Chloromethane)	AIR	MN	
CAA	EPA TO-14A	Methyl tert-butyl ether (MTBE)	AIR	MN	
CAA	EPA TO-14A	Methylene chloride (Dichloromethane)	AIR	MN	
CAA	EPA TO-14A	n-Hexane	AIR	MN	
CAA	EPA TO-14A	o-Xylene	AIR	MN	
CAA	EPA TO-14A	Styrene	AIR	MN	
CAA	EPA TO-14A	Tetrachloroethene	AIR	MN	
CAA	EPA TO-14A	THC as Gas	AIR	MN	
CAA	EPA TO-14A	Toluene	AIR	MN	
CAA	EPA TO-14A	trans-1,2-Dichloroethylene	AIR	MN	
CAA	EPA TO-14A	trans-1,3-Dichloropropylene	AIR	MN	
CAA	EPA TO-14A	Trichloroethene (Trichloroethylene)	AIR	MN	
CAA	EPA TO-14A	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	AIR	MN	
CAA	EPA TO-14A	Vinyl chloride	AIR	MN	
CAA	EPA TO-14A	Xylene (total)	AIR	MN	

EPA TO-17

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-17	1,1,1-Trichloroethane	AIR	MN	
CAA	EPA TO-17	1,1,2,2-Tetrachloroethane	AIR	MN	
CAA	EPA TO-17	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIR	MN	
CAA	EPA TO-17	1,1,2-Trichloroethane	AIR	MN	
CAA	EPA TO-17	1,1-Dichloroethane	AIR	MN	
CAA	EPA TO-17	1,1-Dichloroethylene	AIR	MN	
CAA	EPA TO-17	1,2,4-Trichlorobenzene	AIR	MN	
CAA	EPA TO-17	1,2,4-Trimethylbenzene	AIR	MN	
CAA	EPA TO-17	1,2-Dibromoethane (EDB, Ethylene dibromide)	AIR	MN	
CAA	EPA TO-17	1,2-Dichlorobenzene	AIR	MN	
CAA	EPA TO-17	1,2-Dichloroethane (Ethylene dichloride)	AIR	MN	
CAA	EPA TO-17	1,2-Dichloropropane	AIR	MN	
CAA	EPA TO-17	1,3,5-Trimethylbenzene	AIR	MN	
CAA	EPA TO-17	1,3-Butadiene	AIR	MN	
CAA	EPA TO-17	1,3-Dichlorobenzene	AIR	MN	
CAA	EPA TO-17	1,4-Dichlorobenzene	AIR	MN	
CAA	EPA TO-17	1,4-Dioxane (1,4- Diethyleneoxide)	AIR	MN	
CAA	EPA TO-17	1-Propene	AIR	MN	
CAA	EPA TO-17	2-Butanone (Methyl ethyl ketone, MEK)	AIR	MN	
CAA	EPA TO-17	2-Hexanone	AIR	MN	
CAA	EPA TO-17	4-Ethyltoluene	AIR	MN	
CAA	EPA TO-17	4-Methyl-2-pentanone (MIBK)	AIR	MN	
CAA	EPA TO-17	Acetone	AIR	MN	
CAA	EPA TO-17	Acrolein (Propenal)	AIR	MN	
CAA	EPA TO-17	Acrylonitrile	AIR	MN	
CAA	EPA TO-17	Benzene	AIR	MN	
CAA	EPA TO-17	Benzyl chloride	AIR	MN	
CAA	EPA TO-17	Bromodichloromethane	AIR	MN	
CAA	EPA TO-17	Bromoform	AIR	MN	
CAA	EPA TO-17	Bromomethane	AIR	MN	
CAA	EPA TO-17	Carbon disulfide	AIR	MN	
CAA	EPA TO-17	Carbon tetrachloride	AIR	MN	
CAA	EPA TO-17	Chlorobenzene	AIR	MN	
CAA	EPA TO-17	Chloroethane (Ethyl chloride)	AIR	MN	
CAA	EPA TO-17	Chloroform	AIR	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-17	cis-1,2-Dichloroethylene	AIR	MN	
CAA	EPA TO-17	cis-1,3-Dichloropropene	AIR	MN	
CAA	EPA TO-17	Cyclohexane	AIR	MN	
CAA	EPA TO-17	Dibromochloromethane	AIR	MN	
CAA	EPA TO-17	Dichlorodifluoromethane (Freon-12)	AIR	MN	
CAA	EPA TO-17	Dichlorotetrafluoroethane	AIR	MN	
CAA	EPA TO-17	Ethanol	AIR	MN	
CAA	EPA TO-17	Ethyl acetate	AIR	MN	
CAA	EPA TO-17	Ethylbenzene	AIR	MN	
CAA	EPA TO-17	Hexachloro-1,3-butadiene	AIR	MN	
CAA	EPA TO-17	Isopropyl alcohol (2-Propanol, Isopropanol)	AIR	MN	
CAA	EPA TO-17	Isopropylbenzene	AIR	MN	
CAA	EPA TO-17	m+p-xylene	AIR	MN	
CAA	EPA TO-17	Methyl chloride (Chloromethane)	AIR	MN	
CAA	EPA TO-17	Methyl tert-butyl ether (MTBE)	AIR	MN	
CAA	EPA TO-17	Methylene chloride (Dichloromethane)	AIR	MN	
CAA	EPA TO-17	n-Butylbenzene	AIR	MN	
CAA	EPA TO-17	n-Heptane	AIR	MN	
CAA	EPA TO-17	n-Hexane	AIR	MN	
CAA	EPA TO-17	n-Propylbenzene	AIR	MN	
CAA	EPA TO-17	Naphthalene	AIR	MN	
CAA	EPA TO-17	o-Xylene	AIR	MN	
CAA	EPA TO-17	sec-Butylbenzene	AIR	MN	
CAA	EPA TO-17	Styrene	AIR	MN	
CAA	EPA TO-17	Tetrachloroethene	AIR	MN	
CAA	EPA TO-17	Tetrahydrofuran (THF)	AIR	MN	
CAA	EPA TO-17	Toluene	AIR	MN	
CAA	EPA TO-17	trans-1,2-Dichloroethylene	AIR	MN	
CAA	EPA TO-17	trans-1,3-Dichloropropylene	AIR	MN	
CAA	EPA TO-17	Trichloroethene (Trichloroethylene)	AIR	MN	
CAA	EPA TO-17	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	AIR	MN	
CAA	EPA TO-17	Vinyl acetate	AIR	MN	
CAA	EPA TO-17	Vinyl chloride	AIR	MN	

EPA TO-3

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-3	1,2,4-Trimethylbenzene	AIR	MN	
CAA	EPA TO-3	1,3,5-Trichlorobenzene	AIR	MN	
CAA	EPA TO-3	Benzene	AIR	MN	
CAA	EPA TO-3	Ethane	AIR	MN	
CAA	EPA TO-3	Ethene	AIR	MN	
CAA	EPA TO-3	Ethylbenzene	AIR	MN	
CAA	EPA TO-3	m+p-xylene	AIR	MN	
CAA	EPA TO-3	Methane	AIR	MN	
CAA	EPA TO-3	Methyl tert-butyl ether (MTBE)	AIR	MN	
CAA	EPA TO-3	n-Hexane	AIR	MN	
CAA	EPA TO-3	o-Xylene	AIR	MN	
CAA	EPA TO-3	THC as C1-C4	AIR	MN	
CAA	EPA TO-3	THC as Gas	AIR	MN	
CAA	EPA TO-3	Toluene	AIR	MN	
CAA	EPA TO-3	Total BTEX	AIR	MN	
CAA	EPA TO-3	Xylene (total)	AIR	MN	

EPA TO-9A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-9A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	AIR	MN	
CAA	EPA TO-9A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	AIR	MN	
CAA	EPA TO-9A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	AIR	MN	
CAA	EPA TO-9A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	AIR	MN	
CAA	EPA TO-9A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	AIR	MN	
CAA	EPA TO-9A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	AIR	MN	
CAA	EPA TO-9A	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	AIR	MN	
CAA	EPA TO-9A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	AIR	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CAA	EPA TO-9A	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	AIR	MN	
CAA	EPA TO-9A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	AIR	MN	
CAA	EPA TO-9A	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	AIR	MN	
CAA	EPA TO-9A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	AIR	MN	
CAA	EPA TO-9A	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	AIR	MN	
CAA	EPA TO-9A	2,3,4,6,7,8-Hexachlorodibenzofuran	AIR	MN	
CAA	EPA TO-9A	2,3,4,7,8-Pentachlorodibenzofuran	AIR	MN	
CAA	EPA TO-9A	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	AIR	MN	
CAA	EPA TO-9A	2,3,7,8-Tetrachlorodibenzofuran	AIR	MN	

Modified EPA TO-17 Passive Tube

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CAA	Modified EPA TO-17 Passive Tube	1,1-Dichloroethane	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	1,1-Dichloroethylene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	1,2,4-Trimethylbenzene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	1,3,5-Trimethylbenzene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Benzene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Carbon tetrachloride	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Chloroform	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	cis-1,2-Dichloroethylene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Ethylbenzene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Isopropylbenzene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	m-Xylene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Methyl tert-butyl ether (MTBE)	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Naphthalene	AIR	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CAA	Modified EPA TO-17 Passive Tube	o-Xylene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	p-Xylene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Tetrachloroethene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Toluene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	trans-1,2-Dichloroethylene	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Trichloroethene (Trichloroethylene)	AIR	MN	
CAA	Modified EPA TO-17 Passive Tube	Vinyl chloride	AIR	MN	

Clean Water Program

ASTM D516-90

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	ASTM D516-90	Sulfate	NPW	MN	

EPA 120.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 120.1	Conductivity	NPW	MN	

EPA 160.4

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 160.4	Residue-volatile	NPW	MN	

EPA 1664A (HEM)

Preparation Techniques: Extraction, separatory funnel liquid-liquid (LLE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1664A (HEM)	Oil & Grease	NPW	MN	

EPA 1664A (SGT-HEM)

Preparation Techniques: Extraction, solid phase (SPE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1664A (SGT-HEM)	Oil & Grease	NPW	MN	

EPA 180.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 180.1	Turbidity	NPW	MN	

EPA 300.0

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 300.0	Bromide	NPW	MN	
CWP	EPA 300.0	Chloride	NPW	MN	
CWP	EPA 300.0	Fluoride	NPW	MN	
CWP	EPA 300.0	Nitrate as N	NPW	MN	
CWP	EPA 300.0	Nitrite as N	NPW	MN	
CWP	EPA 300.0	Sulfate	NPW	MN	

EPA 350.1

Preparation Techniques: Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 350.1	Ammonia as N	NPW	MN	

EPA 353.2

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 353.2	Nitrate-nitrite	NPW	MN	
CWP	EPA 353.2	Nitrite as N	NPW	MN	

EPA 353.2 (calc.)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 353.2 (calc.)	Nitrate as N	NPW	MN	

EPA 410.4

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 410.4	Chemical oxygen demand	NPW	MN	

EPA 420.4

Preparation Techniques: Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 420.4	Total Phenolics	NPW	MN	

Hach 10360

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	Hach 10360	Biochemical oxygen demand	NPW	MN	
CWP	Hach 10360	Carbonaceous BOD, CBOD	NPW	MN	
CWP	Hach 10360	Oxygen, dissolved	NPW	MN	

SM 2320 B-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2320 B-97	Alkalinity as CaCO3	NPW	MN	

SM 2340 B-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2340 B-97	Total hardness as CaCO3	NPW	MN	

SM 2510 B-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2510 B-97	Conductivity	NPW	MN	

SM 2540 B-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 B-97	Residue-total	NPW	MN	

SM 2540 C-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 C-97	Residue-filterable (TDS)	NPW	MN	

SM 2540 D-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 D-97	Residue-nonfilterable (TSS)	NPW	MN	

SM 2540 F-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 F-97	Residue-settleable	NPW	MN	

SM 4500-Cl G-93

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-Cl G-93	Total residual chlorine	NPW	MN	

SM 4500-Cl^{-} E-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-Cl^{-} E-97	Chloride	NPW	MN	

SM 4500-CN^{-} E-97

Preparation Techniques: Distillation, MIDI; Distillation, micro; Distillation, macro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-CN^{-} E-97	Total Cyanide	NPW	MN	

SM 4500-CN^{-} G-97

Preparation Techniques: Distillation, MIDI; Distillation, micro; Distillation, macro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-CN^{-} G-97	Free cyanide	NPW	MN	

SM 4500-F^{-} C-97

Preparation Techniques: N/A;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-F¯ C-97	Fluoride	NPW	MN	

SM 4500-H+ B-96

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-H+ B-96	pH	NPW	MN	

SM 4500-NO2¯ B-93

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-NO2¯ B-93	Nitrite as N	NPW	MN	

SM 4500-NO3¯ H-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-NO3¯ H-97	Nitrate-nitrite	NPW	MN	

SM 4500-P E-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-P E-97	Orthophosphate as P	NPW	MN	
CWP	SM 4500-P E-97	Total Phosphorus	NPW	MN	

SM 5220 D-97

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 5220 D-97	Chemical oxygen demand	NPW	MN	

EPA 200.7

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 200.7	Aluminum	NPW	MN	
CWP	EPA 200.7	Antimony	NPW	MN	
CWP	EPA 200.7	Arsenic	NPW	MN	
CWP	EPA 200.7	Barium	NPW	MN	
CWP	EPA 200.7	Beryllium	NPW	MN	
CWP	EPA 200.7	Boron	NPW	MN	
CWP	EPA 200.7	Cadmium	NPW	MN	
CWP	EPA 200.7	Calcium	NPW	MN	
CWP	EPA 200.7	Cobalt	NPW	MN	
CWP	EPA 200.7	Copper	NPW	MN	
CWP	EPA 200.7	Iron	NPW	MN	
CWP	EPA 200.7	Lead	NPW	MN	
CWP	EPA 200.7	Magnesium	NPW	MN	
CWP	EPA 200.7	Manganese	NPW	MN	
CWP	EPA 200.7	Molybdenum	NPW	MN	
CWP	EPA 200.7	Nickel	NPW	MN	
CWP	EPA 200.7	Potassium	NPW	MN	
CWP	EPA 200.7	Selenium	NPW	MN	
CWP	EPA 200.7	Silver	NPW	MN	
CWP	EPA 200.7	Sodium	NPW	MN	
CWP	EPA 200.7	Thallium	NPW	MN	
CWP	EPA 200.7	Tin	NPW	MN	
CWP	EPA 200.7	Titanium	NPW	MN	
CWP	EPA 200.7	Total chromium	NPW	MN	
CWP	EPA 200.7	Vanadium	NPW	MN	
CWP	EPA 200.7	Zinc	NPW	MN	

EPA 200.7

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 200.7	Total hardness as CaCO3	NPW	MN	

EPA 200.8

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 200.8	Aluminum	NPW	MN	
CWP	EPA 200.8	Antimony	NPW	MN	
CWP	EPA 200.8	Arsenic	NPW	MN	
CWP	EPA 200.8	Barium	NPW	MN	
CWP	EPA 200.8	Beryllium	NPW	MN	
CWP	EPA 200.8	Bismuth	NPW	MN	
CWP	EPA 200.8	Boron	NPW	MN	
CWP	EPA 200.8	Cadmium	NPW	MN	
CWP	EPA 200.8	Calcium	NPW	MN	
CWP	EPA 200.8	Chromium	NPW	MN	
CWP	EPA 200.8	Cobalt	NPW	MN	
CWP	EPA 200.8	Copper	NPW	MN	
CWP	EPA 200.8	Iron	NPW	MN	
CWP	EPA 200.8	Lead	NPW	MN	
CWP	EPA 200.8	Lithium	NPW	MN	
CWP	EPA 200.8	Magnesium	NPW	MN	
CWP	EPA 200.8	Manganese	NPW	MN	
CWP	EPA 200.8	Molybdenum	NPW	MN	
CWP	EPA 200.8	Nickel	NPW	MN	
CWP	EPA 200.8	Palladium	NPW	MN	
CWP	EPA 200.8	Platinum	NPW	MN	
CWP	EPA 200.8	Potassium	NPW	MN	
CWP	EPA 200.8	Selenium	NPW	MN	
CWP	EPA 200.8	Silicon	NPW	MN	
CWP	EPA 200.8	Silver	NPW	MN	
CWP	EPA 200.8	Sodium	NPW	MN	
CWP	EPA 200.8	Strontium	NPW	MN	
CWP	EPA 200.8	Thallium	NPW	MN	
CWP	EPA 200.8	Tin	NPW	MN	
CWP	EPA 200.8	Titanium	NPW	MN	
CWP	EPA 200.8	Total chromium	NPW	MN	
CWP	EPA 200.8	Vanadium	NPW	MN	
CWP	EPA 200.8	Zinc	NPW	MN	

EPA 200.8

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 200.8	Mercury	NPW	MN	

EPA 245.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 245.1	Mercury	NPW	MN	

SM 3500-Cr B-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 3500-Cr B-97	Chromium VI	NPW	MN	

SM 9222 B (M-Endo)-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 9222 B (M-Endo)-97	Total coliforms	NPW	MN	

SM 9222 D (m-FC)-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 9222 D (m-FC)-97	Fecal coliforms	NPW	MN	

SM 9223 B (Colilert® Quanti-Tray®)-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 9223 B (Colilert® Quanti-Tray®)-97	Escherichia coli	NPW	MN	

EPA 1613B

Preparation Techniques: Extraction, solid phase (SPE); Extraction, automated soxhlet; Extraction, separatory funnel liquid-liquid (LLE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1613B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NPW	MN	
CWP	EPA 1613B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NPW	MN	
CWP	EPA 1613B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	NPW	MN	
CWP	EPA 1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	NPW	MN	
CWP	EPA 1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	NPW	MN	
CWP	EPA 1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	NPW	MN	
CWP	EPA 1613B	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	NPW	MN	
CWP	EPA 1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	NPW	MN	
CWP	EPA 1613B	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	NPW	MN	
CWP	EPA 1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	NPW	MN	
CWP	EPA 1613B	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	NPW	MN	
CWP	EPA 1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	NPW	MN	
CWP	EPA 1613B	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	NPW	MN	
CWP	EPA 1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	NPW	MN	
CWP	EPA 1613B	2,3,4,7,8-Pentachlorodibenzofuran	NPW	MN	
CWP	EPA 1613B	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	NPW	MN	
CWP	EPA 1613B	2,3,7,8-Tetrachlorodibenzofuran	NPW	MN	
CWP	EPA 1613B	Total HpCDD	NPW	MN	
CWP	EPA 1613B	Total HpCDF	NPW	MN	
CWP	EPA 1613B	Total HxCDD	NPW	MN	
CWP	EPA 1613B	Total HxCDF	NPW	MN	
CWP	EPA 1613B	Total PeCDD	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1613B	Total PeCDF	NPW	MN	
CWP	EPA 1613B	Total TCDD	NPW	MN	
CWP	EPA 1613B	Total TCDF	NPW	MN	

EPA 1668A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1668A	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1668A	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	NPW	MN	
CWP	EPA 1668A	2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	NPW	MN	
CWP	EPA 1668A	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	NPW	MN	
CWP	EPA 1668A	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	NPW	MN	
CWP	EPA 1668A	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	NPW	MN	
CWP	EPA 1668A	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	NPW	MN	
CWP	EPA 1668A	2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ-182)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,4',5-Hexachlorobiphenyl (BZ-137)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	NPW	MN	
CWP	EPA 1668A	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ-145)	NPW	MN	
CWP	EPA 1668A	2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	NPW	MN	
CWP	EPA 1668A	2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	NPW	MN	
CWP	EPA 1668A	2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	NPW	MN	
CWP	EPA 1668A	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	NPW	MN	
CWP	EPA 1668A	2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	NPW	MN	
CWP	EPA 1668A	2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1668A	2,2',3-Trichlorobiphenyl (BZ-16)	NPW	MN	
CWP	EPA 1668A	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	NPW	MN	
CWP	EPA 1668A	2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	NPW	MN	
CWP	EPA 1668A	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	NPW	MN	
CWP	EPA 1668A	2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	NPW	MN	
CWP	EPA 1668A	2,2',4,5-Tetrachlorobiphenyl (BZ-48)	NPW	MN	
CWP	EPA 1668A	2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	NPW	MN	
CWP	EPA 1668A	2,2',4-Trichlorobiphenyl (BZ-17)	NPW	MN	
CWP	EPA 1668A	2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	NPW	MN	
CWP	EPA 1668A	2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	NPW	MN	
CWP	EPA 1668A	2,2',6-Trichlorobiphenyl (BZ-19)	NPW	MN	
CWP	EPA 1668A	2,2'-Dichlorobiphenyl (BZ-4)	NPW	MN	
CWP	EPA 1668A	2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	NPW	MN	
CWP	EPA 1668A	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	NPW	MN	
CWP	EPA 1668A	2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	NPW	MN	
CWP	EPA 1668A	2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	NPW	MN	
CWP	EPA 1668A	2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	NPW	MN	
CWP	EPA 1668A	2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	NPW	MN	
CWP	EPA 1668A	2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	NPW	MN	
CWP	EPA 1668A	2,3',4,5-Tetrachlorobiphenyl (BZ-67)	NPW	MN	
CWP	EPA 1668A	2,3',4-Trichlorobiphenyl (BZ-25)	NPW	MN	
CWP	EPA 1668A	2,3',5'-Trichlorobiphenyl (BZ-34)	NPW	MN	
CWP	EPA 1668A	2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	NPW	MN	
CWP	EPA 1668A	2,3',6-Trichlorobiphenyl (BZ-27)	NPW	MN	
CWP	EPA 1668A	2,3'-Dichlorobiphenyl (BZ-6)	NPW	MN	
CWP	EPA 1668A	2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	NPW	MN	
CWP	EPA 1668A	2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	NPW	MN	
CWP	EPA 1668A	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	NPW	MN	
CWP	EPA 1668A	2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1668A	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	NPW	MN	
CWP	EPA 1668A	2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	NPW	MN	
CWP	EPA 1668A	2,3,3',4-Tetrachlorobiphenyl (BZ-55)	NPW	MN	
CWP	EPA 1668A	2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	NPW	MN	
CWP	EPA 1668A	2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	NPW	MN	
CWP	EPA 1668A	2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	NPW	MN	
CWP	EPA 1668A	2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	NPW	MN	
CWP	EPA 1668A	2,3,3',5-Tetrachlorobiphenyl (BZ-57)	NPW	MN	
CWP	EPA 1668A	2,3,4',5-Tetrachlorobiphenyl (BZ-63)	NPW	MN	
CWP	EPA 1668A	2,3,4',6-Tetrachlorobiphenyl (BZ-64)	NPW	MN	
CWP	EPA 1668A	2,3,4'-Trichlorobiphenyl (BZ-22)	NPW	MN	
CWP	EPA 1668A	2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	NPW	MN	
CWP	EPA 1668A	2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	NPW	MN	
CWP	EPA 1668A	2,3,5-Trichlorobiphenyl (BZ-23)	NPW	MN	
CWP	EPA 1668A	2,3,6-Trichlorobiphenyl (BZ-24)	NPW	MN	
CWP	EPA 1668A	2,3-Dichlorobiphenyl (BZ-5)	NPW	MN	
CWP	EPA 1668A	2,4',5-Trichlorobiphenyl (BZ-31)	NPW	MN	
CWP	EPA 1668A	2,4',6-Trichlorobiphenyl (BZ-32)	NPW	MN	
CWP	EPA 1668A	2,4'-Dichlorobiphenyl (BZ-8)	NPW	MN	
CWP	EPA 1668A	2,4-Dichlorobiphenyl (BZ-7)	NPW	MN	
CWP	EPA 1668A	2,5-Dichlorobiphenyl (BZ-9)	NPW	MN	
CWP	EPA 1668A	2,6-Dichlorobiphenyl (BZ-10)	NPW	MN	
CWP	EPA 1668A	2-Chlorobiphenyl (BZ-1)	NPW	MN	
CWP	EPA 1668A	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	NPW	MN	
CWP	EPA 1668A	3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	NPW	MN	
CWP	EPA 1668A	3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1668A	3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	NPW	MN	
CWP	EPA 1668A	3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	NPW	MN	
CWP	EPA 1668A	3,3',4,5-Tetrachlorobiphenyl (BZ-78)	NPW	MN	
CWP	EPA 1668A	3,3',4-Trichlorobiphenyl (BZ-35)	NPW	MN	
CWP	EPA 1668A	3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	NPW	MN	
CWP	EPA 1668A	3,3',5-Trichlorobiphenyl (BZ-36)	NPW	MN	
CWP	EPA 1668A	3,3'-Dichlorobiphenyl (BZ-11)	NPW	MN	
CWP	EPA 1668A	3,4',5-Trichlorobiphenyl (BZ-39)	NPW	MN	
CWP	EPA 1668A	3,4,4',5-Tetrachlorobiphenyl (BZ-81)	NPW	MN	
CWP	EPA 1668A	3,4,4'-Trichlorobiphenyl (BZ-37)	NPW	MN	
CWP	EPA 1668A	3,4,5-Trichlorobiphenyl (BZ-38)	NPW	MN	
CWP	EPA 1668A	3,5-Dichlorobiphenyl (BZ-14)	NPW	MN	
CWP	EPA 1668A	3-Chlorobiphenyl (BZ-2)	NPW	MN	
CWP	EPA 1668A	4,4'-Dichlorobiphenyl (BZ-15)	NPW	MN	
CWP	EPA 1668A	4-Chlorobiphenyl (BZ-3)	NPW	MN	
CWP	EPA 1668A	Decachlorobiphenyl (BZ-209)	NPW	MN	
CWP	EPA 1668A	PCB-(100/93/102/98)	NPW	MN	
CWP	EPA 1668A	PCB-(107/124)	NPW	MN	
CWP	EPA 1668A	PCB-(108/119/86/97/125/87)	NPW	MN	
CWP	EPA 1668A	PCB-(110/115)	NPW	MN	
CWP	EPA 1668A	PCB-(113/90/101)	NPW	MN	
CWP	EPA 1668A	PCB-(117/116/85)	NPW	MN	
CWP	EPA 1668A	PCB-(128/166)	NPW	MN	
CWP	EPA 1668A	PCB-(13/12)	NPW	MN	
CWP	EPA 1668A	PCB-(134/143)	NPW	MN	
CWP	EPA 1668A	PCB-(138/163/129)	NPW	MN	
CWP	EPA 1668A	PCB-(139/140)	NPW	MN	
CWP	EPA 1668A	PCB-(147/149)	NPW	MN	
CWP	EPA 1668A	PCB-(151/135)	NPW	MN	
CWP	EPA 1668A	PCB-(153/168)	NPW	MN	
CWP	EPA 1668A	PCB-(156/157)	NPW	MN	
CWP	EPA 1668A	PCB-(171/173)	NPW	MN	
CWP	EPA 1668A	PCB-(180/193)	NPW	MN	
CWP	EPA 1668A	PCB-(183/185)	NPW	MN	
CWP	EPA 1668A	PCB-(197/200)	NPW	MN	
CWP	EPA 1668A	PCB-(198/199)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1668A	PCB-(21/33)	NPW	MN	
CWP	EPA 1668A	PCB-(26/29)	NPW	MN	
CWP	EPA 1668A	PCB-(28/20)	NPW	MN	
CWP	EPA 1668A	PCB-(30/18)	NPW	MN	
CWP	EPA 1668A	PCB-(41/40/71)	NPW	MN	
CWP	EPA 1668A	PCB-(44/47/65)	NPW	MN	
CWP	EPA 1668A	PCB-(45/51)	NPW	MN	
CWP	EPA 1668A	PCB-(50/53)	NPW	MN	
CWP	EPA 1668A	PCB-(59/62/75)	NPW	MN	
CWP	EPA 1668A	PCB-(61/70/74/76)	NPW	MN	
CWP	EPA 1668A	PCB-(69/49)	NPW	MN	
CWP	EPA 1668A	PCB-(73/43)	NPW	MN	
CWP	EPA 1668A	PCB-(88/91)	NPW	MN	

EPA 625

Preparation Techniques: Extraction, continuous liquid-liquid (LLE); Extraction, separatory funnel liquid-liquid (LLE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 625	1,2,4-Trichlorobenzene	NPW	MN	
CWP	EPA 625	2,4,5-Trichlorophenol	NPW	MN	
CWP	EPA 625	2,4,6-Trichlorophenol	NPW	MN	
CWP	EPA 625	2,4-Dichlorophenol	NPW	MN	
CWP	EPA 625	2,4-Dimethylphenol	NPW	MN	
CWP	EPA 625	2,4-Dinitrophenol	NPW	MN	
CWP	EPA 625	2,4-Dinitrotoluene (2,4-DNT)	NPW	MN	
CWP	EPA 625	2,6-Dinitrotoluene (2,6-DNT)	NPW	MN	
CWP	EPA 625	2-Chloronaphthalene	NPW	MN	
CWP	EPA 625	2-Chlorophenol	NPW	MN	
CWP	EPA 625	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NPW	MN	
CWP	EPA 625	2-Nitrophenol	NPW	MN	
CWP	EPA 625	3,3'-Dichlorobenzidine	NPW	MN	
CWP	EPA 625	4-Bromophenyl phenyl ether	NPW	MN	
CWP	EPA 625	4-Chloro-3-methylphenol	NPW	MN	
CWP	EPA 625	4-Chlorophenyl phenylether	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 625	4-Nitrophenol	NPW	MN	
CWP	EPA 625	Acenaphthene	NPW	MN	
CWP	EPA 625	Acenaphthylene	NPW	MN	
CWP	EPA 625	Anthracene	NPW	MN	
CWP	EPA 625	Benzidine	NPW	MN	
CWP	EPA 625	Benzo(a)anthracene	NPW	MN	
CWP	EPA 625	Benzo(a)pyrene	NPW	MN	
CWP	EPA 625	Benzo(g,h,i)perylene	NPW	MN	
CWP	EPA 625	Benzo(k)fluoranthene	NPW	MN	
CWP	EPA 625	Benzo[b]fluoranthene	NPW	MN	
CWP	EPA 625	bis(2-Chloroethoxy)methane	NPW	MN	
CWP	EPA 625	bis(2-Chloroethyl) ether	NPW	MN	
CWP	EPA 625	bis(2-Chloroisopropyl) ether	NPW	MN	
CWP	EPA 625	Butyl benzyl phthalate	NPW	MN	
CWP	EPA 625	Chrysene	NPW	MN	
CWP	EPA 625	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	NPW	MN	
CWP	EPA 625	Di-n-butyl phthalate	NPW	MN	
CWP	EPA 625	Di-n-octyl phthalate	NPW	MN	
CWP	EPA 625	Dibenz(a,h) anthracene	NPW	MN	
CWP	EPA 625	Diethyl phthalate	NPW	MN	
CWP	EPA 625	Dimethyl phthalate	NPW	MN	
CWP	EPA 625	Fluoranthene	NPW	MN	
CWP	EPA 625	Fluorene	NPW	MN	
CWP	EPA 625	Hexachlorobenzene	NPW	MN	
CWP	EPA 625	Hexachlorobutadiene	NPW	MN	
CWP	EPA 625	Hexachlorocyclopentadiene	NPW	MN	
CWP	EPA 625	Hexachloroethane	NPW	MN	
CWP	EPA 625	Indeno(1,2,3-cd) pyrene	NPW	MN	
CWP	EPA 625	Isophorone	NPW	MN	
CWP	EPA 625	n-Nitrosodi-n-propylamine	NPW	MN	
CWP	EPA 625	n-Nitrosodimethylamine	NPW	MN	
CWP	EPA 625	n-Nitrosodiphenylamine	NPW	MN	
CWP	EPA 625	Naphthalene	NPW	MN	
CWP	EPA 625	Nitrobenzene	NPW	MN	
CWP	EPA 625	Pentachlorophenol	NPW	MN	
CWP	EPA 625	Phenanthrene	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 625	Phenol	NPW	MN	
CWP	EPA 625	Pyrene	NPW	MN	

EPA 624

Preparation Techniques: Purge and trap;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 624	1,1,1-Trichloroethane	NPW	MN	
CWP	EPA 624	1,1,2,2-Tetrachloroethane	NPW	MN	
CWP	EPA 624	1,1,2-Trichloroethane	NPW	MN	
CWP	EPA 624	1,1-Dichloroethane	NPW	MN	
CWP	EPA 624	1,1-Dichloroethylene	NPW	MN	
CWP	EPA 624	1,2,4-Trichlorobenzene	NPW	MN	
CWP	EPA 624	1,2-Dichlorobenzene	NPW	MN	
CWP	EPA 624	1,2-Dichloroethane (Ethylene dichloride)	NPW	MN	
CWP	EPA 624	1,2-Dichloropropane	NPW	MN	
CWP	EPA 624	1,3-Dichlorobenzene	NPW	MN	
CWP	EPA 624	1,4-Dichlorobenzene	NPW	MN	
CWP	EPA 624	2-Chloroethyl vinyl ether	NPW	MN	
CWP	EPA 624	Acrolein (Propenal)	NPW	MN	
CWP	EPA 624	Acrylonitrile	NPW	MN	
CWP	EPA 624	Benzene	NPW	MN	
CWP	EPA 624	Bromodichloromethane	NPW	MN	
CWP	EPA 624	Bromoform	NPW	MN	
CWP	EPA 624	Carbon tetrachloride	NPW	MN	
CWP	EPA 624	Chlorobenzene	NPW	MN	
CWP	EPA 624	Chlorodibromomethane	NPW	MN	
CWP	EPA 624	Chloroethane (Ethyl chloride)	NPW	MN	
CWP	EPA 624	Chloroform	NPW	MN	
CWP	EPA 624	cis-1,3-Dichloropropene	NPW	MN	
CWP	EPA 624	Ethylbenzene	NPW	MN	
CWP	EPA 624	Isopropylbenzene	NPW	MN	
CWP	EPA 624	Methyl bromide (Bromomethane)	NPW	MN	
CWP	EPA 624	Methyl chloride (Chloromethane)	NPW	MN	
CWP	EPA 624	Methylene chloride (Dichloromethane)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 624	Tetrachloroethylene (Perchloroethylene)	NPW	MN	
CWP	EPA 624	Toluene	NPW	MN	
CWP	EPA 624	trans-1,2-Dichloroethylene	NPW	MN	
CWP	EPA 624	trans-1,3-Dichloropropylene	NPW	MN	
CWP	EPA 624	Trichloroethene (Trichloroethylene)	NPW	MN	
CWP	EPA 624	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	NPW	MN	
CWP	EPA 624	Vinyl chloride	NPW	MN	

Resource Conservation Recovery Program

MDA GD24 (Ag List 1)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	MDA GD24 (Ag List 1)	Acetochlor	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Acetochlor	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Alachlor	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Alachlor	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Atrazine	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Atrazine	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Chlorpyrifos	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Chlorpyrifos	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Cyanazine	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Cyanazine	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Deethyl atrazine (Desethyl atrazine)	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Deethyl atrazine (Desethyl atrazine)	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Deisopropyl atrazine	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Deisopropyl atrazine	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Dimetheneamid	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Dimetheneamid	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	EPTC (Eptam, s-ethyl-dipropyl thio carbamate)	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	EPTC (Eptam, s-ethyl-dipropyl thio carbamate)	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Ethalfluralin (Sonalan)	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Ethalfluralin (Sonalan)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	MDA GD24 (Ag List 1)	Fonophos (Fonofos)	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Fonophos (Fonofos)	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Metolachlor	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Metolachlor	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Metribuzin	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Metribuzin	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Pendimethalin\ (Penoxalin)	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Pendimethalin\ (Penoxalin)	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Phorate	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Phorate	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Prometon	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Prometon	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Propachlor (Ramrod)	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Propachlor (Ramrod)	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Propazine	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Propazine	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Simazine	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Simazine	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Terbufos	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Terbufos	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Triallate	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Triallate	SCM	MN	
RCRP	MDA GD24 (Ag List 1)	Trifluralin (Treflan)	NPW	MN	
RCRP	MDA GD24 (Ag List 1)	Trifluralin (Treflan)	SCM	MN	

MDA GD24 (Ag List 2)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	MDA GD24 (Ag List 2)	2,4,5-T	NPW	MN	
RCRP	MDA GD24 (Ag List 2)	2,4,5-T	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	2,4-D	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	2,4-D	NPW	MN	
RCRP	MDA GD24 (Ag List 2)	2,4-DB	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	2,4-DB	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	MDA GD24 (Ag List 2)	Bentazon	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	Bentazon	NPW	MN	
RCRP	MDA GD24 (Ag List 2)	Dicamba	NPW	MN	
RCRP	MDA GD24 (Ag List 2)	Dicamba	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	Garlon (Triclopyr)	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	Garlon (Triclopyr)	NPW	MN	
RCRP	MDA GD24 (Ag List 2)	MCPA	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	MCPA	NPW	MN	
RCRP	MDA GD24 (Ag List 2)	Picloram	NPW	MN	
RCRP	MDA GD24 (Ag List 2)	Picloram	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	Silvex (2,4,5-TP)	SCM	MN	
RCRP	MDA GD24 (Ag List 2)	Silvex (2,4,5-TP)	NPW	MN	

EPA 9045D

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9045D	pH	SCM	MN	

EPA 9071B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9071B	n-Hexane Extractable Material (O&G)	SCM	MN	
RCRP	EPA 9071B	Oil & Grease	SCM	MN	

EPA 6010B

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, EPA 1311 TCLP, non-volatiles; Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6010B	Aluminum	SCM	MN	
RCRP	EPA 6010B	Aluminum	NPW	MN	
RCRP	EPA 6010B	Antimony	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6010B	Antimony	SCM	MN	
RCRP	EPA 6010B	Arsenic	SCM	MN	
RCRP	EPA 6010B	Arsenic	NPW	MN	
RCRP	EPA 6010B	Barium	NPW	MN	
RCRP	EPA 6010B	Barium	SCM	MN	
RCRP	EPA 6010B	Beryllium	SCM	MN	
RCRP	EPA 6010B	Beryllium	NPW	MN	
RCRP	EPA 6010B	Boron	NPW	MN	
RCRP	EPA 6010B	Boron	SCM	MN	
RCRP	EPA 6010B	Cadmium	SCM	MN	
RCRP	EPA 6010B	Cadmium	NPW	MN	
RCRP	EPA 6010B	Calcium	SCM	MN	
RCRP	EPA 6010B	Calcium	NPW	MN	
RCRP	EPA 6010B	Chromium	SCM	MN	
RCRP	EPA 6010B	Cobalt	NPW	MN	
RCRP	EPA 6010B	Cobalt	SCM	MN	
RCRP	EPA 6010B	Copper	SCM	MN	
RCRP	EPA 6010B	Copper	NPW	MN	
RCRP	EPA 6010B	Iron	SCM	MN	
RCRP	EPA 6010B	Iron	NPW	MN	
RCRP	EPA 6010B	Lead	NPW	MN	
RCRP	EPA 6010B	Lead	SCM	MN	
RCRP	EPA 6010B	Magnesium	SCM	MN	
RCRP	EPA 6010B	Magnesium	NPW	MN	
RCRP	EPA 6010B	Manganese	SCM	MN	
RCRP	EPA 6010B	Manganese	NPW	MN	
RCRP	EPA 6010B	Molybdenum	NPW	MN	
RCRP	EPA 6010B	Molybdenum	SCM	MN	
RCRP	EPA 6010B	Nickel	SCM	MN	
RCRP	EPA 6010B	Nickel	NPW	MN	
RCRP	EPA 6010B	Potassium	SCM	MN	
RCRP	EPA 6010B	Potassium	NPW	MN	
RCRP	EPA 6010B	Selenium	SCM	MN	
RCRP	EPA 6010B	Selenium	NPW	MN	
RCRP	EPA 6010B	Silver	NPW	MN	
RCRP	EPA 6010B	Silver	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6010B	Sodium	SCM	MN	
RCRP	EPA 6010B	Sodium	NPW	MN	
RCRP	EPA 6010B	Thallium	SCM	MN	
RCRP	EPA 6010B	Thallium	NPW	MN	
RCRP	EPA 6010B	Tin	SCM	MN	
RCRP	EPA 6010B	Tin	NPW	MN	
RCRP	EPA 6010B	Titanium	SCM	MN	
RCRP	EPA 6010B	Titanium	NPW	MN	
RCRP	EPA 6010B	Total chromium	NPW	MN	
RCRP	EPA 6010B	Vanadium	NPW	MN	
RCRP	EPA 6010B	Vanadium	SCM	MN	
RCRP	EPA 6010B	Zinc	SCM	MN	
RCRP	EPA 6010B	Zinc	NPW	MN	

EPA 6010C

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, EPA 1311 TCLP, non-volatiles; Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6010C	Aluminum	NPW	MN	
RCRP	EPA 6010C	Aluminum	SCM	MN	
RCRP	EPA 6010C	Antimony	NPW	MN	
RCRP	EPA 6010C	Antimony	SCM	MN	
RCRP	EPA 6010C	Arsenic	SCM	MN	
RCRP	EPA 6010C	Arsenic	NPW	MN	
RCRP	EPA 6010C	Barium	SCM	MN	
RCRP	EPA 6010C	Barium	NPW	MN	
RCRP	EPA 6010C	Beryllium	NPW	MN	
RCRP	EPA 6010C	Beryllium	SCM	MN	
RCRP	EPA 6010C	Boron	SCM	MN	
RCRP	EPA 6010C	Boron	NPW	MN	
RCRP	EPA 6010C	Cadmium	NPW	MN	
RCRP	EPA 6010C	Cadmium	SCM	MN	
RCRP	EPA 6010C	Calcium	SCM	MN	
RCRP	EPA 6010C	Calcium	NPW	MN	
RCRP	EPA 6010C	Chromium	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6010C	Chromium	NPW	MN	
RCRP	EPA 6010C	Cobalt	NPW	MN	
RCRP	EPA 6010C	Cobalt	SCM	MN	
RCRP	EPA 6010C	Copper	NPW	MN	
RCRP	EPA 6010C	Copper	SCM	MN	
RCRP	EPA 6010C	Iron	SCM	MN	
RCRP	EPA 6010C	Iron	NPW	MN	
RCRP	EPA 6010C	Lead	SCM	MN	
RCRP	EPA 6010C	Lead	NPW	MN	
RCRP	EPA 6010C	Magnesium	SCM	MN	
RCRP	EPA 6010C	Magnesium	NPW	MN	
RCRP	EPA 6010C	Manganese	SCM	MN	
RCRP	EPA 6010C	Manganese	NPW	MN	
RCRP	EPA 6010C	Molybdenum	SCM	MN	
RCRP	EPA 6010C	Molybdenum	NPW	MN	
RCRP	EPA 6010C	Nickel	NPW	MN	
RCRP	EPA 6010C	Nickel	SCM	MN	
RCRP	EPA 6010C	Potassium	NPW	MN	
RCRP	EPA 6010C	Potassium	SCM	MN	
RCRP	EPA 6010C	Selenium	NPW	MN	
RCRP	EPA 6010C	Selenium	SCM	MN	
RCRP	EPA 6010C	Silver	NPW	MN	
RCRP	EPA 6010C	Silver	SCM	MN	
RCRP	EPA 6010C	Sodium	SCM	MN	
RCRP	EPA 6010C	Sodium	NPW	MN	
RCRP	EPA 6010C	Thallium	NPW	MN	
RCRP	EPA 6010C	Thallium	SCM	MN	
RCRP	EPA 6010C	Tin	SCM	MN	
RCRP	EPA 6010C	Tin	NPW	MN	
RCRP	EPA 6010C	Titanium	SCM	MN	
RCRP	EPA 6010C	Titanium	NPW	MN	
RCRP	EPA 6010C	Vanadium	NPW	MN	
RCRP	EPA 6010C	Vanadium	SCM	MN	
RCRP	EPA 6010C	Zinc	SCM	MN	
RCRP	EPA 6010C	Zinc	NPW	MN	

EPA 6020

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, EPA 1311 TCLP, non-volatiles; Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6020	Aluminum	SCM	MN	
RCRP	EPA 6020	Aluminum	NPW	MN	
RCRP	EPA 6020	Antimony	SCM	MN	
RCRP	EPA 6020	Antimony	NPW	MN	
RCRP	EPA 6020	Arsenic	SCM	MN	
RCRP	EPA 6020	Arsenic	NPW	MN	
RCRP	EPA 6020	Barium	SCM	MN	
RCRP	EPA 6020	Barium	NPW	MN	
RCRP	EPA 6020	Beryllium	NPW	MN	
RCRP	EPA 6020	Beryllium	SCM	MN	
RCRP	EPA 6020	Bismuth	SCM	MN	
RCRP	EPA 6020	Bismuth	NPW	MN	
RCRP	EPA 6020	Boron	SCM	MN	
RCRP	EPA 6020	Boron	NPW	MN	
RCRP	EPA 6020	Cadmium	SCM	MN	
RCRP	EPA 6020	Cadmium	NPW	MN	
RCRP	EPA 6020	Calcium	NPW	MN	
RCRP	EPA 6020	Calcium	SCM	MN	
RCRP	EPA 6020	Chromium	SCM	MN	
RCRP	EPA 6020	Chromium	NPW	MN	
RCRP	EPA 6020	Cobalt	SCM	MN	
RCRP	EPA 6020	Cobalt	NPW	MN	
RCRP	EPA 6020	Copper	SCM	MN	
RCRP	EPA 6020	Copper	NPW	MN	
RCRP	EPA 6020	Iron	SCM	MN	
RCRP	EPA 6020	Iron	NPW	MN	
RCRP	EPA 6020	Lead	NPW	MN	
RCRP	EPA 6020	Lead	SCM	MN	
RCRP	EPA 6020	Lithium	SCM	MN	
RCRP	EPA 6020	Lithium	NPW	MN	
RCRP	EPA 6020	Magnesium	NPW	MN	
RCRP	EPA 6020	Magnesium	SCM	MN	
RCRP	EPA 6020	Manganese	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6020	Manganese	NPW	MN	
RCRP	EPA 6020	Molybdenum	NPW	MN	
RCRP	EPA 6020	Molybdenum	SCM	MN	
RCRP	EPA 6020	Nickel	NPW	MN	
RCRP	EPA 6020	Nickel	SCM	MN	
RCRP	EPA 6020	Palladium	SCM	MN	
RCRP	EPA 6020	Palladium	NPW	MN	
RCRP	EPA 6020	Platinum	SCM	MN	
RCRP	EPA 6020	Platinum	NPW	MN	
RCRP	EPA 6020	Potassium	SCM	MN	
RCRP	EPA 6020	Potassium	NPW	MN	
RCRP	EPA 6020	Selenium	SCM	MN	
RCRP	EPA 6020	Selenium	NPW	MN	
RCRP	EPA 6020	Silicon	SCM	MN	
RCRP	EPA 6020	Silicon	NPW	MN	
RCRP	EPA 6020	Silver	NPW	MN	
RCRP	EPA 6020	Silver	SCM	MN	
RCRP	EPA 6020	Sodium	SCM	MN	
RCRP	EPA 6020	Sodium	NPW	MN	
RCRP	EPA 6020	Strontium	NPW	MN	
RCRP	EPA 6020	Strontium	SCM	MN	
RCRP	EPA 6020	Thallium	SCM	MN	
RCRP	EPA 6020	Thallium	NPW	MN	
RCRP	EPA 6020	Tin	SCM	MN	
RCRP	EPA 6020	Tin	NPW	MN	
RCRP	EPA 6020	Titanium	SCM	MN	
RCRP	EPA 6020	Titanium	NPW	MN	
RCRP	EPA 6020	Total chromium	NPW	MN	
RCRP	EPA 6020	Vanadium	SCM	MN	
RCRP	EPA 6020	Vanadium	NPW	MN	
RCRP	EPA 6020	Zinc	NPW	MN	
RCRP	EPA 6020	Zinc	SCM	MN	

EPA 6020A

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, EPA 1311 TCLP, non-volatiles; Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6020A	Aluminum	NPW	MN	
RCRP	EPA 6020A	Aluminum	SCM	MN	
RCRP	EPA 6020A	Antimony	SCM	MN	
RCRP	EPA 6020A	Antimony	NPW	MN	
RCRP	EPA 6020A	Arsenic	SCM	MN	
RCRP	EPA 6020A	Arsenic	NPW	MN	
RCRP	EPA 6020A	Barium	NPW	MN	
RCRP	EPA 6020A	Barium	SCM	MN	
RCRP	EPA 6020A	Beryllium	SCM	MN	
RCRP	EPA 6020A	Beryllium	NPW	MN	
RCRP	EPA 6020A	Bismuth	NPW	MN	
RCRP	EPA 6020A	Bismuth	SCM	MN	
RCRP	EPA 6020A	Boron	SCM	MN	
RCRP	EPA 6020A	Boron	NPW	MN	
RCRP	EPA 6020A	Cadmium	NPW	MN	
RCRP	EPA 6020A	Cadmium	SCM	MN	
RCRP	EPA 6020A	Calcium	SCM	MN	
RCRP	EPA 6020A	Calcium	NPW	MN	
RCRP	EPA 6020A	Chromium	NPW	MN	
RCRP	EPA 6020A	Chromium	SCM	MN	
RCRP	EPA 6020A	Cobalt	SCM	MN	
RCRP	EPA 6020A	Cobalt	NPW	MN	
RCRP	EPA 6020A	Copper	SCM	MN	
RCRP	EPA 6020A	Copper	NPW	MN	
RCRP	EPA 6020A	Iron	NPW	MN	
RCRP	EPA 6020A	Iron	SCM	MN	
RCRP	EPA 6020A	Lead	NPW	MN	
RCRP	EPA 6020A	Lead	SCM	MN	
RCRP	EPA 6020A	Lithium	NPW	MN	
RCRP	EPA 6020A	Lithium	SCM	MN	
RCRP	EPA 6020A	Magnesium	SCM	MN	
RCRP	EPA 6020A	Magnesium	NPW	MN	
RCRP	EPA 6020A	Manganese	NPW	MN	
RCRP	EPA 6020A	Manganese	SCM	MN	
RCRP	EPA 6020A	Molybdenum	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6020A	Molybdenum	SCM	MN	
RCRP	EPA 6020A	Nickel	NPW	MN	
RCRP	EPA 6020A	Nickel	SCM	MN	
RCRP	EPA 6020A	Palladium	NPW	MN	
RCRP	EPA 6020A	Palladium	SCM	MN	
RCRP	EPA 6020A	Platinum	NPW	MN	
RCRP	EPA 6020A	Platinum	SCM	MN	
RCRP	EPA 6020A	Potassium	SCM	MN	
RCRP	EPA 6020A	Potassium	NPW	MN	
RCRP	EPA 6020A	Selenium	NPW	MN	
RCRP	EPA 6020A	Selenium	SCM	MN	
RCRP	EPA 6020A	Silicon	SCM	MN	
RCRP	EPA 6020A	Silicon	NPW	MN	
RCRP	EPA 6020A	Silver	SCM	MN	
RCRP	EPA 6020A	Silver	NPW	MN	
RCRP	EPA 6020A	Sodium	SCM	MN	
RCRP	EPA 6020A	Sodium	NPW	MN	
RCRP	EPA 6020A	Strontium	SCM	MN	
RCRP	EPA 6020A	Strontium	NPW	MN	
RCRP	EPA 6020A	Thallium	NPW	MN	
RCRP	EPA 6020A	Thallium	SCM	MN	
RCRP	EPA 6020A	Tin	NPW	MN	
RCRP	EPA 6020A	Tin	SCM	MN	
RCRP	EPA 6020A	Titanium	NPW	MN	
RCRP	EPA 6020A	Titanium	SCM	MN	
RCRP	EPA 6020A	Vanadium	NPW	MN	
RCRP	EPA 6020A	Vanadium	SCM	MN	
RCRP	EPA 6020A	Zinc	NPW	MN	
RCRP	EPA 6020A	Zinc	SCM	MN	

EPA 7470A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7470A	Mercury	NPW	MN	

EPA 7471A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7471A	Mercury	SCM	MN	

EPA 7471B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7471B	Mercury	SCM	MN	

EPA 1613B

Preparation Techniques: Extraction, solid phase (SPE); Extraction, automated soxhlet; Extraction, separatory funnel liquid-liquid (LLE);

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1613B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	SCM	MN	
RCRP	EPA 1613B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	SCM	MN	
RCRP	EPA 1613B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	SCM	MN	
RCRP	EPA 1613B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	SCM	MN	
RCRP	EPA 1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	SCM	MN	
RCRP	EPA 1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	SCM	MN	
RCRP	EPA 1613B	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1613B	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	SCM	MN	
RCRP	EPA 1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	SCM	MN	
RCRP	EPA 1613B	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	SCM	MN	
RCRP	EPA 1613B	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	SCM	MN	
RCRP	EPA 1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	SCM	MN	
RCRP	EPA 1613B	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	SCM	MN	
RCRP	EPA 1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	TISSUE	MN	
RCRP	EPA 1613B	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	SCM	MN	
RCRP	EPA 1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	SCM	MN	
RCRP	EPA 1613B	2,3,4,7,8-Pentachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 1613B	2,3,4,7,8-Pentachlorodibenzofuran	SCM	MN	
RCRP	EPA 1613B	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	SCM	MN	
RCRP	EPA 1613B	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	TISSUE	MN	
RCRP	EPA 1613B	2,3,7,8-Tetrachlorodibenzofuran	SCM	MN	
RCRP	EPA 1613B	2,3,7,8-Tetrachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 1613B	Total HpCDD	TISSUE	MN	
RCRP	EPA 1613B	Total HpCDD	SCM	MN	
RCRP	EPA 1613B	Total HpCDF	SCM	MN	
RCRP	EPA 1613B	Total HpCDF	TISSUE	MN	
RCRP	EPA 1613B	Total HxCDD	SCM	MN	
RCRP	EPA 1613B	Total HxCDD	TISSUE	MN	
RCRP	EPA 1613B	Total HxCDF	SCM	MN	
RCRP	EPA 1613B	Total HxCDF	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1613B	Total PeCDD	SCM	MN	
RCRP	EPA 1613B	Total PeCDD	TISSUE	MN	
RCRP	EPA 1613B	Total PeCDF	SCM	MN	
RCRP	EPA 1613B	Total PeCDF	TISSUE	MN	
RCRP	EPA 1613B	Total TCDD	TISSUE	MN	
RCRP	EPA 1613B	Total TCDD	SCM	MN	
RCRP	EPA 1613B	Total TCDF	SCM	MN	
RCRP	EPA 1613B	Total TCDF	TISSUE	MN	

EPA 1668A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	SCM	MN	
RCRP	EPA 1668A	2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ-182)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ-182)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,4',5-Hexachlorobiphenyl (BZ-137)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,2',3,4,4',5-Hexachlorobiphenyl (BZ-137)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	SCM	MN	
RCRP	EPA 1668A	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ-145)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ-145)	SCM	MN	
RCRP	EPA 1668A	2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	SCM	MN	
RCRP	EPA 1668A	2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	SCM	MN	
RCRP	EPA 1668A	2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	SCM	MN	
RCRP	EPA 1668A	2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	SCM	MN	
RCRP	EPA 1668A	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	SCM	MN	
RCRP	EPA 1668A	2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	SCM	MN	
RCRP	EPA 1668A	2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	TISSUE	MN	
RCRP	EPA 1668A	2,2',3-Trichlorobiphenyl (BZ-16)	SCM	MN	
RCRP	EPA 1668A	2,2',3-Trichlorobiphenyl (BZ-16)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	TISSUE	MN	
RCRP	EPA 1668A	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	SCM	MN	
RCRP	EPA 1668A	2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	SCM	MN	
RCRP	EPA 1668A	2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	TISSUE	MN	
RCRP	EPA 1668A	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	TISSUE	MN	
RCRP	EPA 1668A	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	SCM	MN	
RCRP	EPA 1668A	2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	SCM	MN	
RCRP	EPA 1668A	2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	TISSUE	MN	
RCRP	EPA 1668A	2,2',4,5-Tetrachlorobiphenyl (BZ-48)	SCM	MN	
RCRP	EPA 1668A	2,2',4,5-Tetrachlorobiphenyl (BZ-48)	TISSUE	MN	
RCRP	EPA 1668A	2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	TISSUE	MN	
RCRP	EPA 1668A	2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	SCM	MN	
RCRP	EPA 1668A	2,2',4-Trichlorobiphenyl (BZ-17)	TISSUE	MN	
RCRP	EPA 1668A	2,2',4-Trichlorobiphenyl (BZ-17)	SCM	MN	
RCRP	EPA 1668A	2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	SCM	MN	
RCRP	EPA 1668A	2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	TISSUE	MN	
RCRP	EPA 1668A	2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	TISSUE	MN	
RCRP	EPA 1668A	2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	SCM	MN	
RCRP	EPA 1668A	2,2',6-Trichlorobiphenyl (BZ-19)	SCM	MN	
RCRP	EPA 1668A	2,2',6-Trichlorobiphenyl (BZ-19)	TISSUE	MN	
RCRP	EPA 1668A	2,2'-Dichlorobiphenyl (BZ-4)	SCM	MN	
RCRP	EPA 1668A	2,2'-Dichlorobiphenyl (BZ-4)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	SCM	MN	
RCRP	EPA 1668A	2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	NPW	MN	
RCRP	EPA 1668A	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	SCM	MN	
RCRP	EPA 1668A	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	NPW	MN	
RCRP	EPA 1668A	2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	NPW	MN	
RCRP	EPA 1668A	2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	SCM	MN	
RCRP	EPA 1668A	2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	SCM	MN	
RCRP	EPA 1668A	2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	SCM	MN	
RCRP	EPA 1668A	2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	SCM	MN	
RCRP	EPA 1668A	2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	SCM	MN	
RCRP	EPA 1668A	2,3',4,5-Tetrachlorobiphenyl (BZ-67)	SCM	MN	
RCRP	EPA 1668A	2,3',4,5-Tetrachlorobiphenyl (BZ-67)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4-Trichlorobiphenyl (BZ-25)	TISSUE	MN	
RCRP	EPA 1668A	2,3',4-Trichlorobiphenyl (BZ-25)	SCM	MN	
RCRP	EPA 1668A	2,3',5'-Trichlorobiphenyl (BZ-34)	SCM	MN	
RCRP	EPA 1668A	2,3',5'-Trichlorobiphenyl (BZ-34)	TISSUE	MN	
RCRP	EPA 1668A	2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	TISSUE	MN	
RCRP	EPA 1668A	2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	SCM	MN	
RCRP	EPA 1668A	2,3',6-Trichlorobiphenyl (BZ-27)	SCM	MN	
RCRP	EPA 1668A	2,3',6-Trichlorobiphenyl (BZ-27)	TISSUE	MN	
RCRP	EPA 1668A	2,3'-Dichlorobiphenyl (BZ-6)	SCM	MN	
RCRP	EPA 1668A	2,3'-Dichlorobiphenyl (BZ-6)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ-157)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ-157)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	NPW	MN	
RCRP	EPA 1668A	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4',5-Hexachlorobiphenyl (BZ-156)	NPW	MN	
RCRP	EPA 1668A	2,3,3',4,4',5-Hexachlorobiphenyl (BZ-156)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	NPW	MN	
RCRP	EPA 1668A	2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	SCM	MN	
RCRP	EPA 1668A	2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4-Tetrachlorobiphenyl (BZ-55)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',4-Tetrachlorobiphenyl (BZ-55)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	SCM	MN	
RCRP	EPA 1668A	2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	SCM	MN	
RCRP	EPA 1668A	2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	SCM	MN	
RCRP	EPA 1668A	2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	TISSUE	MN	
RCRP	EPA 1668A	2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	SCM	MN	
RCRP	EPA 1668A	2,3,3',5-Tetrachlorobiphenyl (BZ-57)	SCM	MN	
RCRP	EPA 1668A	2,3,3',5-Tetrachlorobiphenyl (BZ-57)	TISSUE	MN	
RCRP	EPA 1668A	2,3,4',5-Tetrachlorobiphenyl (BZ-63)	TISSUE	MN	
RCRP	EPA 1668A	2,3,4',5-Tetrachlorobiphenyl (BZ-63)	SCM	MN	
RCRP	EPA 1668A	2,3,4',6-Tetrachlorobiphenyl (BZ-64)	SCM	MN	
RCRP	EPA 1668A	2,3,4',6-Tetrachlorobiphenyl (BZ-64)	TISSUE	MN	
RCRP	EPA 1668A	2,3,4'-Trichlorobiphenyl (BZ-22)	SCM	MN	
RCRP	EPA 1668A	2,3,4'-Trichlorobiphenyl (BZ-22)	TISSUE	MN	
RCRP	EPA 1668A	2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	SCM	MN	
RCRP	EPA 1668A	2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	NPW	MN	
RCRP	EPA 1668A	2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	TISSUE	MN	
RCRP	EPA 1668A	2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	SCM	MN	
RCRP	EPA 1668A	2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	TISSUE	MN	
RCRP	EPA 1668A	2,3,5-Trichlorobiphenyl (BZ-23)	SCM	MN	
RCRP	EPA 1668A	2,3,5-Trichlorobiphenyl (BZ-23)	TISSUE	MN	
RCRP	EPA 1668A	2,3,6-Trichlorobiphenyl (BZ-24)	TISSUE	MN	
RCRP	EPA 1668A	2,3,6-Trichlorobiphenyl (BZ-24)	SCM	MN	
RCRP	EPA 1668A	2,3-Dichlorobiphenyl (BZ-5)	TISSUE	MN	
RCRP	EPA 1668A	2,3-Dichlorobiphenyl (BZ-5)	SCM	MN	
RCRP	EPA 1668A	2,4',5-Trichlorobiphenyl (BZ-31)	TISSUE	MN	
RCRP	EPA 1668A	2,4',5-Trichlorobiphenyl (BZ-31)	SCM	MN	
RCRP	EPA 1668A	2,4',6-Trichlorobiphenyl (BZ-32)	TISSUE	MN	
RCRP	EPA 1668A	2,4',6-Trichlorobiphenyl (BZ-32)	SCM	MN	
RCRP	EPA 1668A	2,4'-Dichlorobiphenyl (BZ-8)	SCM	MN	
RCRP	EPA 1668A	2,4'-Dichlorobiphenyl (BZ-8)	TISSUE	MN	
RCRP	EPA 1668A	2,4-Dichlorobiphenyl (BZ-7)	TISSUE	MN	
RCRP	EPA 1668A	2,4-Dichlorobiphenyl (BZ-7)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	2,5-Dichlorobiphenyl (BZ-9)	TISSUE	MN	
RCRP	EPA 1668A	2,5-Dichlorobiphenyl (BZ-9)	SCM	MN	
RCRP	EPA 1668A	2,6-Dichlorobiphenyl (BZ-10)	SCM	MN	
RCRP	EPA 1668A	2,6-Dichlorobiphenyl (BZ-10)	TISSUE	MN	
RCRP	EPA 1668A	2-Chlorobiphenyl (BZ-1)	TISSUE	MN	
RCRP	EPA 1668A	2-Chlorobiphenyl (BZ-1)	SCM	MN	
RCRP	EPA 1668A	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	TISSUE	MN	
RCRP	EPA 1668A	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	NPW	MN	
RCRP	EPA 1668A	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	SCM	MN	
RCRP	EPA 1668A	3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	TISSUE	MN	
RCRP	EPA 1668A	3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	SCM	MN	
RCRP	EPA 1668A	3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	NPW	MN	
RCRP	EPA 1668A	3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	TISSUE	MN	
RCRP	EPA 1668A	3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	NPW	MN	
RCRP	EPA 1668A	3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	SCM	MN	
RCRP	EPA 1668A	3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	SCM	MN	
RCRP	EPA 1668A	3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	TISSUE	MN	
RCRP	EPA 1668A	3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	SCM	MN	
RCRP	EPA 1668A	3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	TISSUE	MN	
RCRP	EPA 1668A	3,3',4,5-Tetrachlorobiphenyl (BZ-78)	SCM	MN	
RCRP	EPA 1668A	3,3',4,5-Tetrachlorobiphenyl (BZ-78)	TISSUE	MN	
RCRP	EPA 1668A	3,3',4-Trichlorobiphenyl (BZ-35)	SCM	MN	
RCRP	EPA 1668A	3,3',4-Trichlorobiphenyl (BZ-35)	TISSUE	MN	
RCRP	EPA 1668A	3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	TISSUE	MN	
RCRP	EPA 1668A	3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	SCM	MN	
RCRP	EPA 1668A	3,3',5-Trichlorobiphenyl (BZ-36)	TISSUE	MN	
RCRP	EPA 1668A	3,3',5-Trichlorobiphenyl (BZ-36)	SCM	MN	
RCRP	EPA 1668A	3,3'-Dichlorobiphenyl (BZ-11)	TISSUE	MN	
RCRP	EPA 1668A	3,3'-Dichlorobiphenyl (BZ-11)	SCM	MN	
RCRP	EPA 1668A	3,4',5-Trichlorobiphenyl (BZ-39)	TISSUE	MN	
RCRP	EPA 1668A	3,4',5-Trichlorobiphenyl (BZ-39)	SCM	MN	
RCRP	EPA 1668A	3,4,4',5-Tetrachlorobiphenyl (BZ-81)	NPW	MN	
RCRP	EPA 1668A	3,4,4',5-Tetrachlorobiphenyl (BZ-81)	SCM	MN	
RCRP	EPA 1668A	3,4,4',5-Tetrachlorobiphenyl (BZ-81)	TISSUE	MN	
RCRP	EPA 1668A	3,4,4'-Trichlorobiphenyl (BZ-37)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	3,4,4'-Trichlorobiphenyl (BZ-37)	SCM	MN	
RCRP	EPA 1668A	3,4,5-Trichlorobiphenyl (BZ-38)	TISSUE	MN	
RCRP	EPA 1668A	3,4,5-Trichlorobiphenyl (BZ-38)	SCM	MN	
RCRP	EPA 1668A	3,5-Dichlorobiphenyl (BZ-14)	SCM	MN	
RCRP	EPA 1668A	3,5-Dichlorobiphenyl (BZ-14)	TISSUE	MN	
RCRP	EPA 1668A	3-Chlorobiphenyl (BZ-2)	SCM	MN	
RCRP	EPA 1668A	3-Chlorobiphenyl (BZ-2)	TISSUE	MN	
RCRP	EPA 1668A	4,4'-Dichlorobiphenyl (BZ-15)	TISSUE	MN	
RCRP	EPA 1668A	4,4'-Dichlorobiphenyl (BZ-15)	SCM	MN	
RCRP	EPA 1668A	4-Chlorobiphenyl (BZ-3)	TISSUE	MN	
RCRP	EPA 1668A	4-Chlorobiphenyl (BZ-3)	SCM	MN	
RCRP	EPA 1668A	Decachlorobiphenyl (BZ-209)	TISSUE	MN	
RCRP	EPA 1668A	Decachlorobiphenyl (BZ-209)	SCM	MN	
RCRP	EPA 1668A	PCB-(100/93/102/98)	SCM	MN	
RCRP	EPA 1668A	PCB-(100/93/102/98)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(107/124)	SCM	MN	
RCRP	EPA 1668A	PCB-(107/124)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(108/119/86/97/125/87)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(108/119/86/97/125/87)	SCM	MN	
RCRP	EPA 1668A	PCB-(110/115)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(110/115)	SCM	MN	
RCRP	EPA 1668A	PCB-(113/90/101)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(113/90/101)	SCM	MN	
RCRP	EPA 1668A	PCB-(117/116/85)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(117/116/85)	SCM	MN	
RCRP	EPA 1668A	PCB-(128/166)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(128/166)	SCM	MN	
RCRP	EPA 1668A	PCB-(13/12)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(13/12)	SCM	MN	
RCRP	EPA 1668A	PCB-(134/143)	SCM	MN	
RCRP	EPA 1668A	PCB-(134/143)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(138/163/129)	SCM	MN	
RCRP	EPA 1668A	PCB-(138/163/129)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(139/140)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(139/140)	SCM	MN	
RCRP	EPA 1668A	PCB-(147/149)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	PCB-(147/149)	SCM	MN	
RCRP	EPA 1668A	PCB-(151/135)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(151/135)	SCM	MN	
RCRP	EPA 1668A	PCB-(153/168)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(153/168)	SCM	MN	
RCRP	EPA 1668A	PCB-(156/157)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(156/157)	SCM	MN	
RCRP	EPA 1668A	PCB-(171/173)	SCM	MN	
RCRP	EPA 1668A	PCB-(171/173)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(180/193)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(180/193)	SCM	MN	
RCRP	EPA 1668A	PCB-(183/185)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(183/185)	SCM	MN	
RCRP	EPA 1668A	PCB-(197/200)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(197/200)	SCM	MN	
RCRP	EPA 1668A	PCB-(198/199)	SCM	MN	
RCRP	EPA 1668A	PCB-(198/199)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(21/33)	SCM	MN	
RCRP	EPA 1668A	PCB-(21/33)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(26/29)	SCM	MN	
RCRP	EPA 1668A	PCB-(26/29)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(28/20)	SCM	MN	
RCRP	EPA 1668A	PCB-(28/20)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(30/18)	SCM	MN	
RCRP	EPA 1668A	PCB-(30/18)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(41/40/71)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(41/40/71)	SCM	MN	
RCRP	EPA 1668A	PCB-(44/47/65)	SCM	MN	
RCRP	EPA 1668A	PCB-(44/47/65)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(45/51)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(45/51)	SCM	MN	
RCRP	EPA 1668A	PCB-(50/53)	SCM	MN	
RCRP	EPA 1668A	PCB-(50/53)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(59/62/75)	SCM	MN	
RCRP	EPA 1668A	PCB-(59/62/75)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(61/70/74/76)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1668A	PCB-(61/70/74/76)	SCM	MN	
RCRP	EPA 1668A	PCB-(69/49)	SCM	MN	
RCRP	EPA 1668A	PCB-(69/49)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(73/43)	SCM	MN	
RCRP	EPA 1668A	PCB-(73/43)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(88/91)	TISSUE	MN	
RCRP	EPA 1668A	PCB-(88/91)	SCM	MN	

EPA 8011

Preparation Techniques: Extraction, micro;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8011	1,2-Dibromo-3-chloropropane (DBCP)	NPW	MN	
RCRP	EPA 8011	1,2-Dibromoethane (EDB, Ethylene dibromide)	NPW	MN	

EPA 8081B

Preparation Techniques: Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8081B	4,4'-DDD	SCM	MN	
RCRP	EPA 8081B	4,4'-DDD	NPW	MN	
RCRP	EPA 8081B	4,4'-DDE	NPW	MN	
RCRP	EPA 8081B	4,4'-DDE	SCM	MN	
RCRP	EPA 8081B	4,4'-DDT	NPW	MN	
RCRP	EPA 8081B	4,4'-DDT	SCM	MN	
RCRP	EPA 8081B	Aldrin	NPW	MN	
RCRP	EPA 8081B	Aldrin	SCM	MN	
RCRP	EPA 8081B	alpha-BHC (alpha-Hexachlorocyclohexane)	SCM	MN	
RCRP	EPA 8081B	alpha-BHC (alpha-Hexachlorocyclohexane)	NPW	MN	
RCRP	EPA 8081B	alpha-Chlordane	NPW	MN	
RCRP	EPA 8081B	alpha-Chlordane	SCM	MN	
RCRP	EPA 8081B	beta-BHC (beta-Hexachlorocyclohexane)	SCM	MN	
RCRP	EPA 8081B	beta-BHC (beta-Hexachlorocyclohexane)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8081B	Chlordane (tech.)	NPW	MN	
RCRP	EPA 8081B	Chlordane (tech.)	SCM	MN	
RCRP	EPA 8081B	delta-BHC	NPW	MN	
RCRP	EPA 8081B	delta-BHC	SCM	MN	
RCRP	EPA 8081B	Dieldrin	SCM	MN	
RCRP	EPA 8081B	Dieldrin	NPW	MN	
RCRP	EPA 8081B	Endosulfan I	SCM	MN	
RCRP	EPA 8081B	Endosulfan I	NPW	MN	
RCRP	EPA 8081B	Endosulfan II	SCM	MN	
RCRP	EPA 8081B	Endosulfan II	NPW	MN	
RCRP	EPA 8081B	Endosulfan sulfate	NPW	MN	
RCRP	EPA 8081B	Endosulfan sulfate	SCM	MN	
RCRP	EPA 8081B	Endrin	NPW	MN	
RCRP	EPA 8081B	Endrin	SCM	MN	
RCRP	EPA 8081B	Endrin aldehyde	SCM	MN	
RCRP	EPA 8081B	Endrin aldehyde	NPW	MN	
RCRP	EPA 8081B	Endrin ketone	SCM	MN	
RCRP	EPA 8081B	Endrin ketone	NPW	MN	
RCRP	EPA 8081B	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	SCM	MN	
RCRP	EPA 8081B	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	NPW	MN	
RCRP	EPA 8081B	gamma-Chlordane	SCM	MN	
RCRP	EPA 8081B	gamma-Chlordane	NPW	MN	
RCRP	EPA 8081B	Heptachlor	SCM	MN	
RCRP	EPA 8081B	Heptachlor	NPW	MN	
RCRP	EPA 8081B	Heptachlor epoxide	SCM	MN	
RCRP	EPA 8081B	Heptachlor epoxide	NPW	MN	
RCRP	EPA 8081B	Isodrin	NPW	MN	
RCRP	EPA 8081B	Isodrin	SCM	MN	
RCRP	EPA 8081B	Methoxychlor	NPW	MN	
RCRP	EPA 8081B	Methoxychlor	SCM	MN	
RCRP	EPA 8081B	Toxaphene (Chlorinated camphene)	NPW	MN	
RCRP	EPA 8081B	Toxaphene (Chlorinated camphene)	SCM	MN	

EPA 8082

Preparation Techniques: Extraction, soxhlet; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8082	Aroclor-1016 (PCB-1016)	SCM	MN	
RCRP	EPA 8082	Aroclor-1016 (PCB-1016)	NPW	MN	
RCRP	EPA 8082	Aroclor-1221 (PCB-1221)	SCM	MN	
RCRP	EPA 8082	Aroclor-1221 (PCB-1221)	NPW	MN	
RCRP	EPA 8082	Aroclor-1232 (PCB-1232)	SCM	MN	
RCRP	EPA 8082	Aroclor-1232 (PCB-1232)	NPW	MN	
RCRP	EPA 8082	Aroclor-1242 (PCB-1242)	NPW	MN	
RCRP	EPA 8082	Aroclor-1242 (PCB-1242)	SCM	MN	
RCRP	EPA 8082	Aroclor-1248 (PCB-1248)	NPW	MN	
RCRP	EPA 8082	Aroclor-1248 (PCB-1248)	SCM	MN	
RCRP	EPA 8082	Aroclor-1254 (PCB-1254)	NPW	MN	
RCRP	EPA 8082	Aroclor-1254 (PCB-1254)	SCM	MN	
RCRP	EPA 8082	Aroclor-1260 (PCB-1260)	SCM	MN	
RCRP	EPA 8082	Aroclor-1260 (PCB-1260)	NPW	MN	
RCRP	EPA 8082	PCBs	SCM	MN	

EPA 8082A

Preparation Techniques: Extraction, soxhlet; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8082A	Aroclor-1016 (PCB-1016)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1016 (PCB-1016)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1221 (PCB-1221)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1221 (PCB-1221)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1232 (PCB-1232)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1232 (PCB-1232)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1242 (PCB-1242)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1242 (PCB-1242)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1248 (PCB-1248)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1248 (PCB-1248)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1254 (PCB-1254)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1254 (PCB-1254)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1260 (PCB-1260)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1260 (PCB-1260)	SCM	MN	

EPA 8270C

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, soxhlet; Extraction, continuous liquid-liquid (LLE); Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles; Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	1,2,4-Trichlorobenzene	NPW	MN	
RCRP	EPA 8270C	1,2,4-Trichlorobenzene	SCM	MN	
RCRP	EPA 8270C	1,2-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270C	1,2-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270C	1,2-Diphenylhydrazine	NPW	MN	
RCRP	EPA 8270C	1,2-Diphenylhydrazine	SCM	MN	
RCRP	EPA 8270C	1,3-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270C	1,3-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270C	1,4-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270C	1,4-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270C	2,4,5-Trichlorophenol	NPW	MN	
RCRP	EPA 8270C	2,4,5-Trichlorophenol	SCM	MN	
RCRP	EPA 8270C	2,4,6-Trichlorophenol	SCM	MN	
RCRP	EPA 8270C	2,4,6-Trichlorophenol	NPW	MN	
RCRP	EPA 8270C	2,4-Dichlorophenol	SCM	MN	
RCRP	EPA 8270C	2,4-Dichlorophenol	NPW	MN	
RCRP	EPA 8270C	2,4-Dimethylphenol	NPW	MN	
RCRP	EPA 8270C	2,4-Dimethylphenol	SCM	MN	
RCRP	EPA 8270C	2,4-Dinitrophenol	SCM	MN	
RCRP	EPA 8270C	2,4-Dinitrophenol	NPW	MN	
RCRP	EPA 8270C	2,4-Dinitrotoluene (2,4-DNT)	SCM	MN	
RCRP	EPA 8270C	2,4-Dinitrotoluene (2,4-DNT)	NPW	MN	
RCRP	EPA 8270C	2,6-Dinitrotoluene (2,6-DNT)	SCM	MN	
RCRP	EPA 8270C	2,6-Dinitrotoluene (2,6-DNT)	NPW	MN	
RCRP	EPA 8270C	2-Chloronaphthalene	NPW	MN	
RCRP	EPA 8270C	2-Chloronaphthalene	SCM	MN	
RCRP	EPA 8270C	2-Chlorophenol	NPW	MN	
RCRP	EPA 8270C	2-Chlorophenol	SCM	MN	
RCRP	EPA 8270C	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	SCM	MN	
RCRP	EPA 8270C	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NPW	MN	
RCRP	EPA 8270C	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270C	2-Methylnaphthalene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	2-Methylphenol (o-Cresol)	SCM	MN	
RCRP	EPA 8270C	2-Methylphenol (o-Cresol)	NPW	MN	
RCRP	EPA 8270C	2-Nitroaniline	NPW	MN	
RCRP	EPA 8270C	2-Nitroaniline	SCM	MN	
RCRP	EPA 8270C	2-Nitrophenol	SCM	MN	
RCRP	EPA 8270C	2-Nitrophenol	NPW	MN	
RCRP	EPA 8270C	3,3'-Dichlorobenzidine	NPW	MN	
RCRP	EPA 8270C	3,3'-Dichlorobenzidine	SCM	MN	
RCRP	EPA 8270C	3-Methylphenol (m-Cresol)	SCM	MN	
RCRP	EPA 8270C	3-Methylphenol (m-Cresol)	NPW	MN	
RCRP	EPA 8270C	3-Nitroaniline	NPW	MN	
RCRP	EPA 8270C	3-Nitroaniline	SCM	MN	
RCRP	EPA 8270C	4-Bromophenyl phenyl ether	NPW	MN	
RCRP	EPA 8270C	4-Bromophenyl phenyl ether	SCM	MN	
RCRP	EPA 8270C	4-Chloro-3-methylphenol	SCM	MN	
RCRP	EPA 8270C	4-Chloro-3-methylphenol	NPW	MN	
RCRP	EPA 8270C	4-Chloroaniline	NPW	MN	
RCRP	EPA 8270C	4-Chloroaniline	SCM	MN	
RCRP	EPA 8270C	4-Chlorophenyl phenylether	SCM	MN	
RCRP	EPA 8270C	4-Chlorophenyl phenylether	NPW	MN	
RCRP	EPA 8270C	4-Methylphenol (p-Cresol)	SCM	MN	
RCRP	EPA 8270C	4-Methylphenol (p-Cresol)	NPW	MN	
RCRP	EPA 8270C	4-Nitroaniline	NPW	MN	
RCRP	EPA 8270C	4-Nitroaniline	SCM	MN	
RCRP	EPA 8270C	4-Nitrophenol	SCM	MN	
RCRP	EPA 8270C	4-Nitrophenol	NPW	MN	
RCRP	EPA 8270C	Acenaphthene	NPW	MN	
RCRP	EPA 8270C	Acenaphthene	SCM	MN	
RCRP	EPA 8270C	Acenaphthylene	SCM	MN	
RCRP	EPA 8270C	Acenaphthylene	NPW	MN	
RCRP	EPA 8270C	Anthracene	SCM	MN	
RCRP	EPA 8270C	Anthracene	NPW	MN	
RCRP	EPA 8270C	Benzidine	SCM	MN	
RCRP	EPA 8270C	Benzidine	NPW	MN	
RCRP	EPA 8270C	Benzo(a)anthracene	NPW	MN	
RCRP	EPA 8270C	Benzo(a)anthracene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	Benzo(a)pyrene	SCM	MN	
RCRP	EPA 8270C	Benzo(a)pyrene	NPW	MN	
RCRP	EPA 8270C	Benzo(g,h,i)perylene	SCM	MN	
RCRP	EPA 8270C	Benzo(g,h,i)perylene	NPW	MN	
RCRP	EPA 8270C	Benzo(k)fluoranthene	SCM	MN	
RCRP	EPA 8270C	Benzo(k)fluoranthene	NPW	MN	
RCRP	EPA 8270C	Benzo[b]fluoranthene	NPW	MN	
RCRP	EPA 8270C	Benzo[b]fluoranthene	SCM	MN	
RCRP	EPA 8270C	Benzoic acid	SCM	MN	
RCRP	EPA 8270C	Benzoic acid	NPW	MN	
RCRP	EPA 8270C	Benzyl alcohol	NPW	MN	
RCRP	EPA 8270C	Benzyl alcohol	SCM	MN	
RCRP	EPA 8270C	bis(2-Chloroethoxy)methane	NPW	MN	
RCRP	EPA 8270C	bis(2-Chloroethoxy)methane	SCM	MN	
RCRP	EPA 8270C	bis(2-Chloroethyl) ether	SCM	MN	
RCRP	EPA 8270C	bis(2-Chloroethyl) ether	NPW	MN	
RCRP	EPA 8270C	bis(2-Chloroisopropyl) ether	NPW	MN	
RCRP	EPA 8270C	bis(2-Chloroisopropyl) ether	SCM	MN	
RCRP	EPA 8270C	Butyl benzyl phthalate	SCM	MN	
RCRP	EPA 8270C	Butyl benzyl phthalate	NPW	MN	
RCRP	EPA 8270C	Chrysene	SCM	MN	
RCRP	EPA 8270C	Chrysene	NPW	MN	
RCRP	EPA 8270C	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	SCM	MN	
RCRP	EPA 8270C	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	NPW	MN	
RCRP	EPA 8270C	Di-n-butyl phthalate	NPW	MN	
RCRP	EPA 8270C	Di-n-butyl phthalate	SCM	MN	
RCRP	EPA 8270C	Di-n-octyl phthalate	NPW	MN	
RCRP	EPA 8270C	Di-n-octyl phthalate	SCM	MN	
RCRP	EPA 8270C	Dibenz(a,h) anthracene	SCM	MN	
RCRP	EPA 8270C	Dibenz(a,h) anthracene	NPW	MN	
RCRP	EPA 8270C	Dibenzofuran	SCM	MN	
RCRP	EPA 8270C	Dibenzofuran	NPW	MN	
RCRP	EPA 8270C	Diethyl phthalate	NPW	MN	
RCRP	EPA 8270C	Diethyl phthalate	SCM	MN	
RCRP	EPA 8270C	Dimethyl phthalate	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	Dimethyl phthalate	NPW	MN	
RCRP	EPA 8270C	Fluoranthene	NPW	MN	
RCRP	EPA 8270C	Fluoranthene	SCM	MN	
RCRP	EPA 8270C	Fluorene	SCM	MN	
RCRP	EPA 8270C	Fluorene	NPW	MN	
RCRP	EPA 8270C	Hexachlorobenzene	SCM	MN	
RCRP	EPA 8270C	Hexachlorobenzene	NPW	MN	
RCRP	EPA 8270C	Hexachlorobutadiene	SCM	MN	
RCRP	EPA 8270C	Hexachlorobutadiene	NPW	MN	
RCRP	EPA 8270C	Hexachlorocyclopentadiene	SCM	MN	
RCRP	EPA 8270C	Hexachlorocyclopentadiene	NPW	MN	
RCRP	EPA 8270C	Hexachloroethane	SCM	MN	
RCRP	EPA 8270C	Hexachloroethane	NPW	MN	
RCRP	EPA 8270C	Indeno(1,2,3-cd) pyrene	NPW	MN	
RCRP	EPA 8270C	Indeno(1,2,3-cd) pyrene	SCM	MN	
RCRP	EPA 8270C	Isophorone	NPW	MN	
RCRP	EPA 8270C	Isophorone	SCM	MN	
RCRP	EPA 8270C	n-Nitrosodi-n-propylamine	SCM	MN	
RCRP	EPA 8270C	n-Nitrosodi-n-propylamine	NPW	MN	
RCRP	EPA 8270C	n-Nitrosodimethylamine	SCM	MN	
RCRP	EPA 8270C	n-Nitrosodimethylamine	NPW	MN	
RCRP	EPA 8270C	n-Nitrosodiphenylamine	SCM	MN	
RCRP	EPA 8270C	n-Nitrosodiphenylamine	NPW	MN	
RCRP	EPA 8270C	Naphthalene	NPW	MN	
RCRP	EPA 8270C	Naphthalene	SCM	MN	
RCRP	EPA 8270C	Nitrobenzene	NPW	MN	
RCRP	EPA 8270C	Nitrobenzene	SCM	MN	
RCRP	EPA 8270C	Pentachlorophenol	NPW	MN	
RCRP	EPA 8270C	Pentachlorophenol	SCM	MN	
RCRP	EPA 8270C	Phenanthrene	SCM	MN	
RCRP	EPA 8270C	Phenanthrene	NPW	MN	
RCRP	EPA 8270C	Phenol	NPW	MN	
RCRP	EPA 8270C	Phenol	SCM	MN	
RCRP	EPA 8270C	Pyrene	SCM	MN	
RCRP	EPA 8270C	Pyrene	NPW	MN	
RCRP	EPA 8270C	Pyridine	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	Pyridine	NPW	MN	

EPA 8270C SIM

Preparation Techniques: Extraction, soxhlet; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C SIM	Benzo(a)anthracene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo(a)anthracene	SCM	MN	
RCRP	EPA 8270C SIM	Benzo(a)pyrene	SCM	MN	
RCRP	EPA 8270C SIM	Benzo(a)pyrene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo(j)fluoranthene	SCM	MN	
RCRP	EPA 8270C SIM	Benzo(j)fluoranthene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo(k)fluoranthene	SCM	MN	
RCRP	EPA 8270C SIM	Benzo(k)fluoranthene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo[b]fluoranthene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo[b]fluoranthene	SCM	MN	
RCRP	EPA 8270C SIM	Dibenz(a,h) anthracene	NPW	MN	
RCRP	EPA 8270C SIM	Dibenz(a,h) anthracene	SCM	MN	
RCRP	EPA 8270C SIM	Fluoranthene	SCM	MN	
RCRP	EPA 8270C SIM	Fluoranthene	NPW	MN	
RCRP	EPA 8270C SIM	Indeno(1,2,3-cd) pyrene	SCM	MN	
RCRP	EPA 8270C SIM	Indeno(1,2,3-cd) pyrene	NPW	MN	
RCRP	EPA 8270C SIM	Pyrene	NPW	MN	
RCRP	EPA 8270C SIM	Pyrene	SCM	MN	

EPA 8270D

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, soxhlet; Extraction, continuous liquid-liquid (LLE); Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles; Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	1,2,4-Trichlorobenzene	NPW	MN	
RCRP	EPA 8270D	1,2,4-Trichlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,2-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,2-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270D	1,2-Diphenylhydrazine	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	1,2-Diphenylhydrazine	NPW	MN	
RCRP	EPA 8270D	1,3-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,3-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270D	1,4-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,4-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270D	2,4,5-Trichlorophenol	SCM	MN	
RCRP	EPA 8270D	2,4,5-Trichlorophenol	NPW	MN	
RCRP	EPA 8270D	2,4,6-Trichlorophenol	SCM	MN	
RCRP	EPA 8270D	2,4,6-Trichlorophenol	NPW	MN	
RCRP	EPA 8270D	2,4-Dichlorophenol	NPW	MN	
RCRP	EPA 8270D	2,4-Dichlorophenol	SCM	MN	
RCRP	EPA 8270D	2,4-Dimethylphenol	NPW	MN	
RCRP	EPA 8270D	2,4-Dimethylphenol	SCM	MN	
RCRP	EPA 8270D	2,4-Dinitrophenol	SCM	MN	
RCRP	EPA 8270D	2,4-Dinitrophenol	NPW	MN	
RCRP	EPA 8270D	2,4-Dinitrotoluene (2,4-DNT)	SCM	MN	
RCRP	EPA 8270D	2,4-Dinitrotoluene (2,4-DNT)	NPW	MN	
RCRP	EPA 8270D	2,6-Dinitrotoluene (2,6-DNT)	SCM	MN	
RCRP	EPA 8270D	2,6-Dinitrotoluene (2,6-DNT)	NPW	MN	
RCRP	EPA 8270D	2-Chloronaphthalene	SCM	MN	
RCRP	EPA 8270D	2-Chloronaphthalene	NPW	MN	
RCRP	EPA 8270D	2-Chlorophenol	NPW	MN	
RCRP	EPA 8270D	2-Chlorophenol	SCM	MN	
RCRP	EPA 8270D	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270D	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8270D	2-Methylphenol (o-Cresol)	SCM	MN	
RCRP	EPA 8270D	2-Methylphenol (o-Cresol)	NPW	MN	
RCRP	EPA 8270D	2-Nitroaniline	NPW	MN	
RCRP	EPA 8270D	2-Nitroaniline	SCM	MN	
RCRP	EPA 8270D	2-Nitrophenol	NPW	MN	
RCRP	EPA 8270D	2-Nitrophenol	SCM	MN	
RCRP	EPA 8270D	3,3'-Dichlorobenzidine	SCM	MN	
RCRP	EPA 8270D	3,3'-Dichlorobenzidine	NPW	MN	
RCRP	EPA 8270D	3-Methylcholanthrene	NPW	MN	
RCRP	EPA 8270D	3-Methylcholanthrene	SCM	MN	
RCRP	EPA 8270D	3-Methylphenol (m-Cresol)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	3-Methylphenol (m-Cresol)	SCM	MN	
RCRP	EPA 8270D	3-Nitroaniline	NPW	MN	
RCRP	EPA 8270D	3-Nitroaniline	SCM	MN	
RCRP	EPA 8270D	4,6-Dinitro-2-methylphenol	SCM	MN	
RCRP	EPA 8270D	4,6-Dinitro-2-methylphenol	NPW	MN	
RCRP	EPA 8270D	4-Bromophenyl phenyl ether	NPW	MN	
RCRP	EPA 8270D	4-Bromophenyl phenyl ether	SCM	MN	
RCRP	EPA 8270D	4-Chloro-3-methylphenol	SCM	MN	
RCRP	EPA 8270D	4-Chloro-3-methylphenol	NPW	MN	
RCRP	EPA 8270D	4-Chloroaniline	SCM	MN	
RCRP	EPA 8270D	4-Chloroaniline	NPW	MN	
RCRP	EPA 8270D	4-Chlorophenyl phenylether	SCM	MN	
RCRP	EPA 8270D	4-Chlorophenyl phenylether	NPW	MN	
RCRP	EPA 8270D	4-Methylphenol (p-Cresol)	SCM	MN	
RCRP	EPA 8270D	4-Methylphenol (p-Cresol)	NPW	MN	
RCRP	EPA 8270D	4-Nitroaniline	SCM	MN	
RCRP	EPA 8270D	4-Nitroaniline	NPW	MN	
RCRP	EPA 8270D	4-Nitrophenol	NPW	MN	
RCRP	EPA 8270D	4-Nitrophenol	SCM	MN	
RCRP	EPA 8270D	Acenaphthene	NPW	MN	
RCRP	EPA 8270D	Acenaphthene	SCM	MN	
RCRP	EPA 8270D	Acenaphthylene	SCM	MN	
RCRP	EPA 8270D	Acenaphthylene	NPW	MN	
RCRP	EPA 8270D	Anthracene	NPW	MN	
RCRP	EPA 8270D	Anthracene	SCM	MN	
RCRP	EPA 8270D	Benzidine	NPW	MN	
RCRP	EPA 8270D	Benzidine	SCM	MN	
RCRP	EPA 8270D	Benzo(a)anthracene	NPW	MN	
RCRP	EPA 8270D	Benzo(a)anthracene	SCM	MN	
RCRP	EPA 8270D	Benzo(a)pyrene	NPW	MN	
RCRP	EPA 8270D	Benzo(a)pyrene	SCM	MN	
RCRP	EPA 8270D	Benzo(g,h,i)perylene	NPW	MN	
RCRP	EPA 8270D	Benzo(g,h,i)perylene	SCM	MN	
RCRP	EPA 8270D	Benzo(k)fluoranthene	SCM	MN	
RCRP	EPA 8270D	Benzo(k)fluoranthene	NPW	MN	
RCRP	EPA 8270D	Benzo[b]fluoranthene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	Benzo[b]fluoranthene	NPW	MN	
RCRP	EPA 8270D	Benzoic acid	NPW	MN	
RCRP	EPA 8270D	Benzoic acid	SCM	MN	
RCRP	EPA 8270D	Benzyl alcohol	NPW	MN	
RCRP	EPA 8270D	Benzyl alcohol	SCM	MN	
RCRP	EPA 8270D	bis(2-Chloroethoxy)methane	NPW	MN	
RCRP	EPA 8270D	bis(2-Chloroethoxy)methane	SCM	MN	
RCRP	EPA 8270D	bis(2-Chloroethyl) ether	SCM	MN	
RCRP	EPA 8270D	bis(2-Chloroethyl) ether	NPW	MN	
RCRP	EPA 8270D	bis(2-Chloroisopropyl) ether	NPW	MN	
RCRP	EPA 8270D	bis(2-Chloroisopropyl) ether	SCM	MN	
RCRP	EPA 8270D	Butyl benzyl phthalate	SCM	MN	
RCRP	EPA 8270D	Butyl benzyl phthalate	NPW	MN	
RCRP	EPA 8270D	Carbazole	NPW	MN	
RCRP	EPA 8270D	Carbazole	SCM	MN	
RCRP	EPA 8270D	Chrysene	SCM	MN	
RCRP	EPA 8270D	Chrysene	NPW	MN	
RCRP	EPA 8270D	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	SCM	MN	
RCRP	EPA 8270D	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	NPW	MN	
RCRP	EPA 8270D	Di-n-butyl phthalate	NPW	MN	
RCRP	EPA 8270D	Di-n-butyl phthalate	SCM	MN	
RCRP	EPA 8270D	Di-n-octyl phthalate	SCM	MN	
RCRP	EPA 8270D	Di-n-octyl phthalate	NPW	MN	
RCRP	EPA 8270D	Dibenz(a,h) anthracene	SCM	MN	
RCRP	EPA 8270D	Dibenz(a,h) anthracene	NPW	MN	
RCRP	EPA 8270D	Dibenzofuran	SCM	MN	
RCRP	EPA 8270D	Dibenzofuran	NPW	MN	
RCRP	EPA 8270D	Diethyl phthalate	SCM	MN	
RCRP	EPA 8270D	Diethyl phthalate	NPW	MN	
RCRP	EPA 8270D	Dimethyl phthalate	SCM	MN	
RCRP	EPA 8270D	Dimethyl phthalate	NPW	MN	
RCRP	EPA 8270D	Fluoranthene	SCM	MN	
RCRP	EPA 8270D	Fluoranthene	NPW	MN	
RCRP	EPA 8270D	Fluorene	NPW	MN	
RCRP	EPA 8270D	Fluorene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	Hexachlorobenzene	NPW	MN	
RCRP	EPA 8270D	Hexachlorobenzene	SCM	MN	
RCRP	EPA 8270D	Hexachlorobutadiene	SCM	MN	
RCRP	EPA 8270D	Hexachlorobutadiene	NPW	MN	
RCRP	EPA 8270D	Hexachlorocyclopentadiene	NPW	MN	
RCRP	EPA 8270D	Hexachlorocyclopentadiene	SCM	MN	
RCRP	EPA 8270D	Hexachloroethane	SCM	MN	
RCRP	EPA 8270D	Hexachloroethane	NPW	MN	
RCRP	EPA 8270D	Indeno(1,2,3-cd) pyrene	NPW	MN	
RCRP	EPA 8270D	Indeno(1,2,3-cd) pyrene	SCM	MN	
RCRP	EPA 8270D	Isophorone	NPW	MN	
RCRP	EPA 8270D	Isophorone	SCM	MN	
RCRP	EPA 8270D	n-Nitrosodi-n-propylamine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosodi-n-propylamine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosodimethylamine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosodimethylamine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosodiphenylamine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosodiphenylamine	SCM	MN	
RCRP	EPA 8270D	Naphthalene	NPW	MN	
RCRP	EPA 8270D	Naphthalene	SCM	MN	
RCRP	EPA 8270D	Nitrobenzene	NPW	MN	
RCRP	EPA 8270D	Nitrobenzene	SCM	MN	
RCRP	EPA 8270D	Pentachlorophenol	SCM	MN	
RCRP	EPA 8270D	Pentachlorophenol	NPW	MN	
RCRP	EPA 8270D	Phenanthrene	SCM	MN	
RCRP	EPA 8270D	Phenanthrene	NPW	MN	
RCRP	EPA 8270D	Phenol	SCM	MN	
RCRP	EPA 8270D	Phenol	NPW	MN	
RCRP	EPA 8270D	Pyrene	SCM	MN	
RCRP	EPA 8270D	Pyrene	NPW	MN	
RCRP	EPA 8270D	Pyridine	SCM	MN	
RCRP	EPA 8270D	Pyridine	NPW	MN	

EPA 8270D SIM

Preparation Techniques: Extraction, soxhlet; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D SIM	1-Methylnaphthalene	SCM	MN	
RCRP	EPA 8270D SIM	1-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270D SIM	2-Chloronaphthalene	SCM	MN	
RCRP	EPA 8270D SIM	2-Chloronaphthalene	NPW	MN	
RCRP	EPA 8270D SIM	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270D SIM	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8270D SIM	Acenaphthene	NPW	MN	
RCRP	EPA 8270D SIM	Acenaphthene	SCM	MN	
RCRP	EPA 8270D SIM	Acenaphthylene	NPW	MN	
RCRP	EPA 8270D SIM	Acenaphthylene	SCM	MN	
RCRP	EPA 8270D SIM	Anthracene	NPW	MN	
RCRP	EPA 8270D SIM	Anthracene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo(a)anthracene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(a)anthracene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo(a)pyrene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(a)pyrene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo(g,h,i)perylene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo(g,h,i)perylene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(k)fluoranthene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(k)fluoranthene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo[b]fluoranthene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo[b]fluoranthene	NPW	MN	
RCRP	EPA 8270D SIM	Chrysene	SCM	MN	
RCRP	EPA 8270D SIM	Chrysene	NPW	MN	
RCRP	EPA 8270D SIM	Dibenz(a,h) anthracene	SCM	MN	
RCRP	EPA 8270D SIM	Dibenz(a,h) anthracene	NPW	MN	
RCRP	EPA 8270D SIM	Dibenzofuran	NPW	MN	
RCRP	EPA 8270D SIM	Dibenzofuran	SCM	MN	
RCRP	EPA 8270D SIM	Fluoranthene	SCM	MN	
RCRP	EPA 8270D SIM	Fluoranthene	NPW	MN	
RCRP	EPA 8270D SIM	Fluorene	SCM	MN	
RCRP	EPA 8270D SIM	Fluorene	NPW	MN	
RCRP	EPA 8270D SIM	Indeno(1,2,3-cd) pyrene	SCM	MN	
RCRP	EPA 8270D SIM	Indeno(1,2,3-cd) pyrene	NPW	MN	
RCRP	EPA 8270D SIM	Naphthalene	NPW	MN	
RCRP	EPA 8270D SIM	Naphthalene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D SIM	Phenanthrene	NPW	MN	
RCRP	EPA 8270D SIM	Phenanthrene	SCM	MN	
RCRP	EPA 8270D SIM	Pyrene	NPW	MN	
RCRP	EPA 8270D SIM	Pyrene	SCM	MN	
RCRP	EPA 8270D SIM	Quinoline	SCM	MN	
RCRP	EPA 8270D SIM	Quinoline	NPW	MN	

EPA 8280B

Preparation Techniques: Extraction, separatory funnel liquid-liquid (LLE);

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8280B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	SCM	MN	
RCRP	EPA 8280B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NPW	MN	
RCRP	EPA 8280B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NPW	MN	
RCRP	EPA 8280B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	SCM	MN	
RCRP	EPA 8280B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	NPW	MN	
RCRP	EPA 8280B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	SCM	MN	
RCRP	EPA 8280B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	NPW	MN	
RCRP	EPA 8280B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	SCM	MN	
RCRP	EPA 8280B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	NPW	MN	
RCRP	EPA 8280B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	SCM	MN	
RCRP	EPA 8280B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	SCM	MN	
RCRP	EPA 8280B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	NPW	MN	
RCRP	EPA 8280B	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	NPW	MN	
RCRP	EPA 8280B	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	SCM	MN	
RCRP	EPA 8280B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	SCM	MN	
RCRP	EPA 8280B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	NPW	MN	
RCRP	EPA 8280B	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8280B	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	SCM	MN	
RCRP	EPA 8280B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	NPW	MN	
RCRP	EPA 8280B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	SCM	MN	
RCRP	EPA 8280B	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	NPW	MN	
RCRP	EPA 8280B	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	SCM	MN	
RCRP	EPA 8280B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	NPW	MN	
RCRP	EPA 8280B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	SCM	MN	
RCRP	EPA 8280B	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	SCM	MN	
RCRP	EPA 8280B	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	NPW	MN	
RCRP	EPA 8280B	2,3,4,6,7,8-Hexachlorodibenzofuran	NPW	MN	
RCRP	EPA 8280B	2,3,4,6,7,8-Hexachlorodibenzofuran	SCM	MN	
RCRP	EPA 8280B	2,3,4,7,8-Pentachlorodibenzofuran	SCM	MN	
RCRP	EPA 8280B	2,3,4,7,8-Pentachlorodibenzofuran	NPW	MN	
RCRP	EPA 8280B	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	SCM	MN	
RCRP	EPA 8280B	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	NPW	MN	
RCRP	EPA 8280B	2,3,7,8-Tetrachlorodibenzofuran	SCM	MN	
RCRP	EPA 8280B	2,3,7,8-Tetrachlorodibenzofuran	NPW	MN	
RCRP	EPA 8280B	Total HpCDD	NPW	MN	
RCRP	EPA 8280B	Total HpCDD	SCM	MN	
RCRP	EPA 8280B	Total HpCDF	NPW	MN	
RCRP	EPA 8280B	Total HpCDF	SCM	MN	
RCRP	EPA 8280B	Total HxCDD	NPW	MN	
RCRP	EPA 8280B	Total HxCDD	SCM	MN	
RCRP	EPA 8280B	Total HxCDF	NPW	MN	
RCRP	EPA 8280B	Total HxCDF	SCM	MN	
RCRP	EPA 8280B	Total PeCDD	SCM	MN	
RCRP	EPA 8280B	Total PeCDD	NPW	MN	
RCRP	EPA 8280B	Total PeCDF	NPW	MN	
RCRP	EPA 8280B	Total PeCDF	SCM	MN	
RCRP	EPA 8280B	Total TCDD	NPW	MN	
RCRP	EPA 8280B	Total TCDD	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8280B	Total TCDF	NPW	MN	
RCRP	EPA 8280B	Total TCDF	SCM	MN	

EPA 8290

Preparation Techniques: Extraction, soxhlet; Extraction, separatory funnel liquid-liquid (LLE);

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8290	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NPW	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	SCM	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	SCM	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NPW	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	SCM	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	NPW	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	NPW	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	SCM	MN	
RCRP	EPA 8290	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	NPW	MN	
RCRP	EPA 8290	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	SCM	MN	
RCRP	EPA 8290	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	SCM	MN	
RCRP	EPA 8290	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	NPW	MN	
RCRP	EPA 8290	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8290	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	SCM	MN	
RCRP	EPA 8290	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	NPW	MN	
RCRP	EPA 8290	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	SCM	MN	
RCRP	EPA 8290	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	SCM	MN	
RCRP	EPA 8290	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	NPW	MN	
RCRP	EPA 8290	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	NPW	MN	
RCRP	EPA 8290	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	SCM	MN	
RCRP	EPA 8290	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	NPW	MN	
RCRP	EPA 8290	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	SCM	MN	
RCRP	EPA 8290	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	NPW	MN	
RCRP	EPA 8290	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	TISSUE	MN	
RCRP	EPA 8290	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	SCM	MN	
RCRP	EPA 8290	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	SCM	MN	
RCRP	EPA 8290	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	NPW	MN	
RCRP	EPA 8290	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	TISSUE	MN	
RCRP	EPA 8290	2,3,4,6,7,8-Hexachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 8290	2,3,4,6,7,8-Hexachlorodibenzofuran	NPW	MN	
RCRP	EPA 8290	2,3,4,6,7,8-Hexachlorodibenzofuran	SCM	MN	
RCRP	EPA 8290	2,3,4,7,8-Pentachlorodibenzofuran	NPW	MN	
RCRP	EPA 8290	2,3,4,7,8-Pentachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 8290	2,3,4,7,8-Pentachlorodibenzofuran	SCM	MN	
RCRP	EPA 8290	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	NPW	MN	
RCRP	EPA 8290	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8290	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	TISSUE	MN	
RCRP	EPA 8290	2,3,7,8-Tetrachlorodibenzofuran	NPW	MN	
RCRP	EPA 8290	2,3,7,8-Tetrachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 8290	2,3,7,8-Tetrachlorodibenzofuran	SCM	MN	
RCRP	EPA 8290	Total Heptachlorodibenzo-p-dioxin (HpCDD, Total)	TISSUE	MN	
RCRP	EPA 8290	Total Heptachlorodibenzofuran (HpCDF, Total)	TISSUE	MN	
RCRP	EPA 8290	Total Hexachlorodibenzo-p-dioxin (HxCDD, Total)	TISSUE	MN	
RCRP	EPA 8290	Total Hexachlorodibenzofuran (HxCDF, Total)	TISSUE	MN	
RCRP	EPA 8290	Total Hpcdd	SCM	MN	
RCRP	EPA 8290	Total Hpcdd	NPW	MN	
RCRP	EPA 8290	Total Hpcdf	SCM	MN	
RCRP	EPA 8290	Total Hpcdf	NPW	MN	
RCRP	EPA 8290	Total Hxcdd	NPW	MN	
RCRP	EPA 8290	Total Hxcdd	SCM	MN	
RCRP	EPA 8290	Total Hxcdf	NPW	MN	
RCRP	EPA 8290	Total Hxcdf	SCM	MN	
RCRP	EPA 8290	Total Pecdd	SCM	MN	
RCRP	EPA 8290	Total Pecdd	NPW	MN	
RCRP	EPA 8290	Total Pecdf	SCM	MN	
RCRP	EPA 8290	Total Pecdf	NPW	MN	
RCRP	EPA 8290	Total Pentachlorodibenzo-p-dioxin (PeCDD, Total)	TISSUE	MN	
RCRP	EPA 8290	Total Pentachlorodibenzofuran (PeCDF, Total)	TISSUE	MN	
RCRP	EPA 8290	Total TCDD	NPW	MN	
RCRP	EPA 8290	Total TCDD	SCM	MN	
RCRP	EPA 8290	Total TCDF	NPW	MN	
RCRP	EPA 8290	Total TCDF	SCM	MN	
RCRP	EPA 8290	Total Tetrachlorodibenzo-p-dioxin (TCDD, Total)	TISSUE	MN	
RCRP	EPA 8290	Total Tetrachlorodibenzofuran (TCDF, Total)	TISSUE	MN	

EPA 8290A

Preparation Techniques: Extraction, soxhlet; Extraction, separatory funnel liquid-liquid (LLE);

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8290A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	SCM	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NPW	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	SCM	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NPW	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	SCM	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	NPW	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	SCM	MN	
RCRP	EPA 8290A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	NPW	MN	
RCRP	EPA 8290A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	NPW	MN	
RCRP	EPA 8290A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	SCM	MN	
RCRP	EPA 8290A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	SCM	MN	
RCRP	EPA 8290A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	NPW	MN	
RCRP	EPA 8290A	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	NPW	MN	
RCRP	EPA 8290A	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	SCM	MN	
RCRP	EPA 8290A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	NPW	MN	
RCRP	EPA 8290A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	SCM	MN	
RCRP	EPA 8290A	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	TISSUE	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8290A	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	NPW	MN	
RCRP	EPA 8290A	1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	SCM	MN	
RCRP	EPA 8290A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	SCM	MN	
RCRP	EPA 8290A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	NPW	MN	
RCRP	EPA 8290A	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	NPW	MN	
RCRP	EPA 8290A	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	SCM	MN	
RCRP	EPA 8290A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	NPW	MN	
RCRP	EPA 8290A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	TISSUE	MN	
RCRP	EPA 8290A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	SCM	MN	
RCRP	EPA 8290A	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	SCM	MN	
RCRP	EPA 8290A	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	NPW	MN	
RCRP	EPA 8290A	1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	TISSUE	MN	
RCRP	EPA 8290A	2,3,4,6,7,8-Hexachlorodibenzofuran	NPW	MN	
RCRP	EPA 8290A	2,3,4,6,7,8-Hexachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 8290A	2,3,4,6,7,8-Hexachlorodibenzofuran	SCM	MN	
RCRP	EPA 8290A	2,3,4,7,8-Pentachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 8290A	2,3,4,7,8-Pentachlorodibenzofuran	SCM	MN	
RCRP	EPA 8290A	2,3,4,7,8-Pentachlorodibenzofuran	NPW	MN	
RCRP	EPA 8290A	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	SCM	MN	
RCRP	EPA 8290A	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	TISSUE	MN	
RCRP	EPA 8290A	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	NPW	MN	
RCRP	EPA 8290A	2,3,7,8-Tetrachlorodibenzofuran	TISSUE	MN	
RCRP	EPA 8290A	2,3,7,8-Tetrachlorodibenzofuran	SCM	MN	
RCRP	EPA 8290A	2,3,7,8-Tetrachlorodibenzofuran	NPW	MN	
RCRP	EPA 8290A	Total Heptachlorodibenzo-p-dioxin (HpCDD, Total)	SCM	MN	
RCRP	EPA 8290A	Total Heptachlorodibenzo-p-dioxin (HpCDD, Total)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8290A	Total Heptachlorodibenzofuran (HpCDF, Total)	NPW	MN	
RCRP	EPA 8290A	Total Heptachlorodibenzofuran (HpCDF, Total)	SCM	MN	
RCRP	EPA 8290A	Total Hexachlorodibenzo-p-dioxin (HxCDD, Total)	SCM	MN	
RCRP	EPA 8290A	Total Hexachlorodibenzo-p-dioxin (HxCDD, Total)	NPW	MN	
RCRP	EPA 8290A	Total Hexachlorodibenzofuran (HxCDF, Total)	NPW	MN	
RCRP	EPA 8290A	Total Hexachlorodibenzofuran (HxCDF, Total)	SCM	MN	
RCRP	EPA 8290A	Total HpCDD	TISSUE	MN	
RCRP	EPA 8290A	Total HpCDF	TISSUE	MN	
RCRP	EPA 8290A	Total HxCDD	TISSUE	MN	
RCRP	EPA 8290A	Total HxCDF	TISSUE	MN	
RCRP	EPA 8290A	Total PeCDD	TISSUE	MN	
RCRP	EPA 8290A	Total PeCDF	TISSUE	MN	
RCRP	EPA 8290A	Total Pentachlorodibenzo-p-dioxin (PeCDD, Total)	SCM	MN	
RCRP	EPA 8290A	Total Pentachlorodibenzo-p-dioxin (PeCDD, Total)	NPW	MN	
RCRP	EPA 8290A	Total Pentachlorodibenzofuran (PeCDF, Total)	SCM	MN	
RCRP	EPA 8290A	Total Pentachlorodibenzofuran (PeCDF, Total)	NPW	MN	
RCRP	EPA 8290A	Total TCDD	TISSUE	MN	
RCRP	EPA 8290A	Total TCDF	TISSUE	MN	
RCRP	EPA 8290A	Total Tetrachlorodibenzo-p-dioxin (TCDD, Total)	NPW	MN	
RCRP	EPA 8290A	Total Tetrachlorodibenzo-p-dioxin (TCDD, Total)	SCM	MN	
RCRP	EPA 8290A	Total Tetrachlorodibenzofuran (TCDF, Total)	SCM	MN	
RCRP	EPA 8290A	Total Tetrachlorodibenzofuran (TCDF, Total)	NPW	MN	

EPA 9095B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9095B	Paint Filter Liquids Test	SCM	MN	

EPA 8015B

Preparation Techniques: Purge and trap; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8015B	Diesel range organics (DRO)	SCM	MN	
RCRP	EPA 8015B	Diesel range organics (DRO)	NPW	MN	
RCRP	EPA 8015B	Gasoline range organics (GRO)	NPW	MN	
RCRP	EPA 8015B	Gasoline range organics (GRO)	SCM	MN	

EPA 8015C

Preparation Techniques: Purge and trap; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8015C	Diesel range organics (DRO)	SCM	MN	
RCRP	EPA 8015C	Diesel range organics (DRO)	NPW	MN	
RCRP	EPA 8015C	Gasoline range organics (GRO)	SCM	MN	
RCRP	EPA 8015C	Gasoline range organics (GRO)	NPW	MN	

EPA 8021B

Preparation Techniques: Purge and trap;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8021B	1,2,4-Trimethylbenzene	NPW	MN	
RCRP	EPA 8021B	1,2,4-Trimethylbenzene	SCM	MN	
RCRP	EPA 8021B	1,3,5-Trimethylbenzene	NPW	MN	
RCRP	EPA 8021B	1,3,5-Trimethylbenzene	SCM	MN	
RCRP	EPA 8021B	Benzene	SCM	MN	
RCRP	EPA 8021B	Benzene	NPW	MN	
RCRP	EPA 8021B	Ethylbenzene	NPW	MN	
RCRP	EPA 8021B	Ethylbenzene	SCM	MN	
RCRP	EPA 8021B	m+p-xylene	SCM	MN	
RCRP	EPA 8021B	m+p-xylene	NPW	MN	
RCRP	EPA 8021B	Methyl tert-butyl ether (MTBE)	SCM	MN	
RCRP	EPA 8021B	Methyl tert-butyl ether (MTBE)	NPW	MN	
RCRP	EPA 8021B	o-Xylene	SCM	MN	
RCRP	EPA 8021B	o-Xylene	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8021B	Toluene	SCM	MN	
RCRP	EPA 8021B	Toluene	NPW	MN	

EPA 8260B

Preparation Techniques: Extraction, EPA 1312 SPLP, zero headspace (ZHE); Extraction, EPA 1311 TCLP, zero headspace (ZHE); Purge and trap;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	1,1,1,2-Tetrachloroethane	NPW	MN	
RCRP	EPA 8260B	1,1,1,2-Tetrachloroethane	SCM	MN	
RCRP	EPA 8260B	1,1,1-Trichloroethane	SCM	MN	
RCRP	EPA 8260B	1,1,1-Trichloroethane	NPW	MN	
RCRP	EPA 8260B	1,1,2,2-Tetrachloroethane	NPW	MN	
RCRP	EPA 8260B	1,1,2,2-Tetrachloroethane	SCM	MN	
RCRP	EPA 8260B	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	SCM	MN	
RCRP	EPA 8260B	1,1,2-Trichloroethane	SCM	MN	
RCRP	EPA 8260B	1,1,2-Trichloroethane	NPW	MN	
RCRP	EPA 8260B	1,1-Dichloroethane	NPW	MN	
RCRP	EPA 8260B	1,1-Dichloroethane	SCM	MN	
RCRP	EPA 8260B	1,1-Dichloroethylene	NPW	MN	
RCRP	EPA 8260B	1,1-Dichloroethylene	SCM	MN	
RCRP	EPA 8260B	1,1-Dichloropropene	NPW	MN	
RCRP	EPA 8260B	1,1-Dichloropropene	SCM	MN	
RCRP	EPA 8260B	1,2,3-Trichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,2,3-Trichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,2,3-Trichloropropane	NPW	MN	
RCRP	EPA 8260B	1,2,3-Trichloropropane	SCM	MN	
RCRP	EPA 8260B	1,2,4-Trichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,2,4-Trichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,2,4-Trimethylbenzene	SCM	MN	
RCRP	EPA 8260B	1,2,4-Trimethylbenzene	NPW	MN	
RCRP	EPA 8260B	1,2-Dibromo-3-chloropropane (DBCP)	SCM	MN	
RCRP	EPA 8260B	1,2-Dibromo-3-chloropropane (DBCP)	NPW	MN	
RCRP	EPA 8260B	1,2-Dibromoethane (EDB, Ethylene dibromide)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	1,2-Dibromoethane (EDB, Ethylene dibromide)	NPW	MN	
RCRP	EPA 8260B	1,2-Dichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,2-Dichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,2-Dichloroethane (Ethylene dichloride)	NPW	MN	
RCRP	EPA 8260B	1,2-Dichloroethane (Ethylene dichloride)	SCM	MN	
RCRP	EPA 8260B	1,2-Dichloropropane	SCM	MN	
RCRP	EPA 8260B	1,2-Dichloropropane	NPW	MN	
RCRP	EPA 8260B	1,3,5-Trimethylbenzene	SCM	MN	
RCRP	EPA 8260B	1,3,5-Trimethylbenzene	NPW	MN	
RCRP	EPA 8260B	1,3-Dichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,3-Dichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,3-Dichloropropane	NPW	MN	
RCRP	EPA 8260B	1,3-Dichloropropane	SCM	MN	
RCRP	EPA 8260B	1,4-Dichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,4-Dichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,4-Dioxane (1,4- Diethyleneoxide)	SCM	MN	
RCRP	EPA 8260B	1,4-Dioxane (1,4- Diethyleneoxide)	NPW	MN	
RCRP	EPA 8260B	2,2-Dichloropropane	NPW	MN	
RCRP	EPA 8260B	2,2-Dichloropropane	SCM	MN	
RCRP	EPA 8260B	2-Butanone (Methyl ethyl ketone, MEK)	SCM	MN	
RCRP	EPA 8260B	2-Butanone (Methyl ethyl ketone, MEK)	NPW	MN	
RCRP	EPA 8260B	2-Chloroethyl vinyl ether	NPW	MN	
RCRP	EPA 8260B	2-Chloroethyl vinyl ether	SCM	MN	
RCRP	EPA 8260B	2-Chlorotoluene	NPW	MN	
RCRP	EPA 8260B	2-Chlorotoluene	SCM	MN	
RCRP	EPA 8260B	2-Hexanone	NPW	MN	
RCRP	EPA 8260B	2-Hexanone	SCM	MN	
RCRP	EPA 8260B	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8260B	2-Nitropropane	NPW	MN	
RCRP	EPA 8260B	4-Chlorotoluene	SCM	MN	
RCRP	EPA 8260B	4-Chlorotoluene	NPW	MN	
RCRP	EPA 8260B	4-Isopropyltoluene (p-Cymene)	SCM	MN	
RCRP	EPA 8260B	4-Isopropyltoluene (p-Cymene)	NPW	MN	
RCRP	EPA 8260B	4-Methyl-2-pentanone (MIBK)	NPW	MN	
RCRP	EPA 8260B	4-Methyl-2-pentanone (MIBK)	SCM	MN	
RCRP	EPA 8260B	Acetone	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	Acetone	SCM	MN	
RCRP	EPA 8260B	Acetonitrile	NPW	MN	
RCRP	EPA 8260B	Acrolein (Propenal)	NPW	MN	
RCRP	EPA 8260B	Acrolein (Propenal)	SCM	MN	
RCRP	EPA 8260B	Acrylonitrile	SCM	MN	
RCRP	EPA 8260B	Acrylonitrile	NPW	MN	
RCRP	EPA 8260B	Allyl chloride (3-Chloropropene)	SCM	MN	
RCRP	EPA 8260B	Allyl chloride (3-Chloropropene)	NPW	MN	
RCRP	EPA 8260B	Benzene	NPW	MN	
RCRP	EPA 8260B	Benzene	SCM	MN	
RCRP	EPA 8260B	Bromobenzene	NPW	MN	
RCRP	EPA 8260B	Bromobenzene	SCM	MN	
RCRP	EPA 8260B	Bromochloromethane	SCM	MN	
RCRP	EPA 8260B	Bromochloromethane	NPW	MN	
RCRP	EPA 8260B	Bromodichloromethane	SCM	MN	
RCRP	EPA 8260B	Bromodichloromethane	NPW	MN	
RCRP	EPA 8260B	Bromoform	SCM	MN	
RCRP	EPA 8260B	Bromoform	NPW	MN	
RCRP	EPA 8260B	Carbon disulfide	SCM	MN	
RCRP	EPA 8260B	Carbon disulfide	NPW	MN	
RCRP	EPA 8260B	Carbon tetrachloride	SCM	MN	
RCRP	EPA 8260B	Carbon tetrachloride	NPW	MN	
RCRP	EPA 8260B	Chlorobenzene	SCM	MN	
RCRP	EPA 8260B	Chlorobenzene	NPW	MN	
RCRP	EPA 8260B	Chlorodibromomethane	SCM	MN	
RCRP	EPA 8260B	Chlorodibromomethane	NPW	MN	
RCRP	EPA 8260B	Chloroethane (Ethyl chloride)	SCM	MN	
RCRP	EPA 8260B	Chloroethane (Ethyl chloride)	NPW	MN	
RCRP	EPA 8260B	Chloroform	NPW	MN	
RCRP	EPA 8260B	Chloroform	SCM	MN	
RCRP	EPA 8260B	Chloroprene (2-Chloro-1,3-butadiene)	NPW	MN	
RCRP	EPA 8260B	cis & trans-1,2-Dichloroethene	SCM	MN	
RCRP	EPA 8260B	cis-1,2-Dichloroethylene	NPW	MN	
RCRP	EPA 8260B	cis-1,2-Dichloroethylene	SCM	MN	
RCRP	EPA 8260B	cis-1,3-Dichloropropene	NPW	MN	
RCRP	EPA 8260B	cis-1,3-Dichloropropene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	cis-1,4-Dichloro-2-butene	NPW	MN	
RCRP	EPA 8260B	Di-isopropylether (DIPE)	SCM	MN	
RCRP	EPA 8260B	Dibromomethane (Methylene bromide)	SCM	MN	
RCRP	EPA 8260B	Dibromomethane (Methylene bromide)	NPW	MN	
RCRP	EPA 8260B	Dichlorodifluoromethane (Freon-12)	NPW	MN	
RCRP	EPA 8260B	Dichlorodifluoromethane (Freon-12)	SCM	MN	
RCRP	EPA 8260B	Diethyl ether	NPW	MN	
RCRP	EPA 8260B	Diethyl ether	SCM	MN	
RCRP	EPA 8260B	Ethanol	SCM	MN	
RCRP	EPA 8260B	Ethanol	NPW	MN	
RCRP	EPA 8260B	Ethyl acetate	NPW	MN	
RCRP	EPA 8260B	Ethyl methacrylate	NPW	MN	
RCRP	EPA 8260B	Ethyl-t-butylether (ETBE) (2-Ethoxy-2-methylpropane)	SCM	MN	
RCRP	EPA 8260B	Ethyl-t-butylether (ETBE) (2-Ethoxy-2-methylpropane)	SCM	MN	User Defined S-MN-O-521 Rev. 27
RCRP	EPA 8260B	Ethyl-t-butylether (ETBE) (2-Ethoxy-2-methylpropane)	NPW	MN	User Defined S-MN-O-521 Rev. 27
RCRP	EPA 8260B	Ethylbenzene	NPW	MN	
RCRP	EPA 8260B	Ethylbenzene	SCM	MN	
RCRP	EPA 8260B	Hexachlorobutadiene	NPW	MN	
RCRP	EPA 8260B	Hexachlorobutadiene	SCM	MN	
RCRP	EPA 8260B	Iodomethane (Methyl iodide)	NPW	MN	
RCRP	EPA 8260B	Iodomethane (Methyl iodide)	SCM	MN	
RCRP	EPA 8260B	Isobutyl alcohol (2-Methyl-1-propanol)	SCM	MN	
RCRP	EPA 8260B	Isobutyl alcohol (2-Methyl-1-propanol)	NPW	MN	
RCRP	EPA 8260B	Isopropyl alcohol (2-Propanol, Isopropanol)	SCM	MN	
RCRP	EPA 8260B	Isopropyl alcohol (2-Propanol, Isopropanol)	NPW	MN	
RCRP	EPA 8260B	Isopropylbenzene	SCM	MN	
RCRP	EPA 8260B	Isopropylbenzene	NPW	MN	
RCRP	EPA 8260B	m+p-xylene	SCM	MN	
RCRP	EPA 8260B	m+p-xylene	NPW	MN	
RCRP	EPA 8260B	Methacrylonitrile	NPW	MN	
RCRP	EPA 8260B	Methyl bromide (Bromomethane)	NPW	MN	
RCRP	EPA 8260B	Methyl bromide (Bromomethane)	SCM	MN	
RCRP	EPA 8260B	Methyl chloride (Chloromethane)	NPW	MN	
RCRP	EPA 8260B	Methyl chloride (Chloromethane)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	Methyl methacrylate	NPW	MN	
RCRP	EPA 8260B	Methyl tert-butyl ether (MTBE)	NPW	MN	
RCRP	EPA 8260B	Methyl tert-butyl ether (MTBE)	SCM	MN	
RCRP	EPA 8260B	Methylene chloride (Dichloromethane)	NPW	MN	
RCRP	EPA 8260B	Methylene chloride (Dichloromethane)	SCM	MN	
RCRP	EPA 8260B	n-Butyl alcohol (1-Butanol, n-Butanol)	NPW	MN	
RCRP	EPA 8260B	n-Butylbenzene	SCM	MN	
RCRP	EPA 8260B	n-Butylbenzene	NPW	MN	
RCRP	EPA 8260B	n-Hexane	SCM	MN	
RCRP	EPA 8260B	n-Propylbenzene	SCM	MN	
RCRP	EPA 8260B	n-Propylbenzene	NPW	MN	
RCRP	EPA 8260B	Naphthalene	NPW	MN	
RCRP	EPA 8260B	Naphthalene	SCM	MN	
RCRP	EPA 8260B	o-Xylene	NPW	MN	
RCRP	EPA 8260B	o-Xylene	SCM	MN	
RCRP	EPA 8260B	Propionitrile (Ethyl cyanide)	NPW	MN	
RCRP	EPA 8260B	sec-Butylbenzene	SCM	MN	
RCRP	EPA 8260B	sec-Butylbenzene	NPW	MN	
RCRP	EPA 8260B	Styrene	SCM	MN	
RCRP	EPA 8260B	Styrene	NPW	MN	
RCRP	EPA 8260B	T-amylmethylether (TAME)	NPW	MN	User Defined S-MN-O-521 Rev. 27
RCRP	EPA 8260B	T-amylmethylether (TAME)	SCM	MN	User Defined S-MN-O-521 Rev. 27
RCRP	EPA 8260B	tert-Butyl alcohol	SCM	MN	
RCRP	EPA 8260B	tert-Butyl alcohol	NPW	MN	
RCRP	EPA 8260B	tert-Butylbenzene	SCM	MN	
RCRP	EPA 8260B	tert-Butylbenzene	NPW	MN	
RCRP	EPA 8260B	Tetrachloroethylene (Perchloroethylene)	SCM	MN	
RCRP	EPA 8260B	Tetrachloroethylene (Perchloroethylene)	NPW	MN	
RCRP	EPA 8260B	Tetrahydrofuran (THF)	SCM	MN	
RCRP	EPA 8260B	Toluene	SCM	MN	
RCRP	EPA 8260B	Toluene	NPW	MN	
RCRP	EPA 8260B	trans-1,2-Dichloroethylene	NPW	MN	
RCRP	EPA 8260B	trans-1,2-Dichloroethylene	SCM	MN	
RCRP	EPA 8260B	trans-1,3-Dichloropropylene	NPW	MN	
RCRP	EPA 8260B	trans-1,3-Dichloropropylene	SCM	MN	
RCRP	EPA 8260B	trans-1,4-Dichloro-2-butene	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	trans-1,4-Dichloro-2-butene	SCM	MN	
RCRP	EPA 8260B	Trichloroethene (Trichloroethylene)	NPW	MN	
RCRP	EPA 8260B	Trichloroethene (Trichloroethylene)	SCM	MN	
RCRP	EPA 8260B	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	SCM	MN	
RCRP	EPA 8260B	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	NPW	MN	
RCRP	EPA 8260B	Vinyl acetate	SCM	MN	
RCRP	EPA 8260B	Vinyl acetate	NPW	MN	
RCRP	EPA 8260B	Vinyl chloride	SCM	MN	
RCRP	EPA 8260B	Vinyl chloride	NPW	MN	
RCRP	EPA 8260B	Xylene (total)	SCM	MN	

EPA RSK-175 (GC/FID)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA RSK-175 (GC/FID)	Ethane	NPW	MN	
RCRP	EPA RSK-175 (GC/FID)	Ethene	NPW	MN	
RCRP	EPA RSK-175 (GC/FID)	Methane	NPW	MN	

Safe Drinking Water Program

ASTM D516-90

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	ASTM D516-90	Sulfate	DW	MN	

EPA 180.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 180.1	Turbidity	DW	MN	

EPA 300.0

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 300.0	Chloride	DW	MN	
SDWP	EPA 300.0	Fluoride	DW	MN	
SDWP	EPA 300.0	Nitrate	DW	MN	
SDWP	EPA 300.0	Nitrite	DW	MN	
SDWP	EPA 300.0	Sulfate	DW	MN	

EPA 353.2

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 353.2	Nitrate	DW	MN	
SDWP	EPA 353.2	Nitrite	DW	MN	

SM 2320 B-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 2320 B-97	Alkalinity as CaCO3	DW	MN	

SM 2340 B-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 2340 B-97	Hardness	DW	MN	

SM 2510 B-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 2510 B-97	Conductivity	DW	MN	

SM 2540 C-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 2540 C-97	Residue-filterable (TDS)	DW	MN	

SM 4500-Cl G-93

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 4500-Cl G-93	Total chlorine	DW	MN	

SM 4500-CN^{-} E-97

Preparation Techniques: Distillation, MIDI; Distillation, micro; Distillation, macro;

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 4500-CN^{-} E-97	Cyanide	DW	MN	

SM 4500-F^{-} C-97

Preparation Techniques: N/A;

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 4500-F^{-} C-97	Fluoride	DW	MN	

SM 4500-H+ B-96

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 4500-H+ B-96	pH	DW	MN	

SM 4500-$NO2^{-}$ B-93

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 4500-NO2¯ B-93	Nitrite	DW	MN	

SM 4500-P E-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 4500-P E-97	Orthophosphate as P	DW	MN	

EPA 200.8

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 200.8	Aluminum	DW	MN	
SDWP	EPA 200.8	Antimony	DW	MN	
SDWP	EPA 200.8	Arsenic	DW	MN	
SDWP	EPA 200.8	Barium	DW	MN	
SDWP	EPA 200.8	Beryllium	DW	MN	
SDWP	EPA 200.8	Cadmium	DW	MN	
SDWP	EPA 200.8	Chromium	DW	MN	
SDWP	EPA 200.8	Copper	DW	MN	
SDWP	EPA 200.8	Lead	DW	MN	
SDWP	EPA 200.8	Manganese	DW	MN	
SDWP	EPA 200.8	Mercury	DW	MN	
SDWP	EPA 200.8	Nickel	DW	MN	
SDWP	EPA 200.8	Selenium	DW	MN	
SDWP	EPA 200.8	Silver	DW	MN	
SDWP	EPA 200.8	Thallium	DW	MN	
SDWP	EPA 200.8	Zinc	DW	MN	

EPA 245.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 245.1	Mercury	DW	MN	

SM 9215 B (R2A)-94

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 9215 B (R2A)-94	Heterotrophic plate count	DW	MN	

SM 9223 B (Colilert® Quanti-Tray®)-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 9223 B (Colilert® Quanti-Tray®)-97	Escherichia coli	DW	MN	
SDWP	SM 9223 B (Colilert® Quanti-Tray®)-97	Total coliforms	DW	MN	

SM 9223 B (Colilert®)-97

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 9223 B (Colilert®)-97	Escherichia coli	DW	MN	
SDWP	SM 9223 B (Colilert®)-97	Total coliforms	DW	MN	

EPA 1613

Preparation Techniques: Extraction, solid phase (SPE); Extraction, automated soxhlet; Extraction, separatory funnel liquid-liquid (LLE);

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 1613	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	DW	MN	

EPA 524.2

Preparation Techniques: Purge and trap;

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 524.2	1,1,1,2-Tetrachloroethane	DW	MN	
SDWP	EPA 524.2	1,1,1-Trichloroethane	DW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 524.2	1,1,2,2-Tetrachloroethane	DW	MN	
SDWP	EPA 524.2	1,1,2-Trichloroethane	DW	MN	
SDWP	EPA 524.2	1,1-Dichloroethane	DW	MN	
SDWP	EPA 524.2	1,1-Dichloroethylene	DW	MN	
SDWP	EPA 524.2	1,1-Dichloropropene	DW	MN	
SDWP	EPA 524.2	1,2,3-Trichlorobenzene	DW	MN	
SDWP	EPA 524.2	1,2,3-Trichloropropane	DW	MN	
SDWP	EPA 524.2	1,2,4-Trichlorobenzene	DW	MN	
SDWP	EPA 524.2	1,2,4-Trimethylbenzene	DW	MN	
SDWP	EPA 524.2	1,2-Dichlorobenzene	DW	MN	
SDWP	EPA 524.2	1,2-Dichloroethane (Ethylene dichloride)	DW	MN	
SDWP	EPA 524.2	1,2-Dichloropropane	DW	MN	
SDWP	EPA 524.2	1,3,5-Trichlorobenzene	DW	MN	
SDWP	EPA 524.2	1,3-Dichlorobenzene	DW	MN	
SDWP	EPA 524.2	1,4-Dichlorobenzene	DW	MN	
SDWP	EPA 524.2	2,2-Dichloropropane	DW	MN	
SDWP	EPA 524.2	2-Chlorotoluene	DW	MN	
SDWP	EPA 524.2	4-Chlorotoluene	DW	MN	
SDWP	EPA 524.2	Benzene	DW	MN	
SDWP	EPA 524.2	Bromobenzene	DW	MN	
SDWP	EPA 524.2	Bromochloromethane	DW	MN	
SDWP	EPA 524.2	Bromodichloromethane	DW	MN	
SDWP	EPA 524.2	Bromoform	DW	MN	
SDWP	EPA 524.2	Bromomethane	DW	MN	
SDWP	EPA 524.2	Carbon tetrachloride	DW	MN	
SDWP	EPA 524.2	Chlorobenzene	DW	MN	
SDWP	EPA 524.2	Chlorodibromomethane	DW	MN	
SDWP	EPA 524.2	Chloroethane (Ethyl chloride)	DW	MN	
SDWP	EPA 524.2	Chloroform	DW	MN	
SDWP	EPA 524.2	cis-1,2-Dichloroethylene	DW	MN	
SDWP	EPA 524.2	cis-1,3-Dichloropropene	DW	MN	
SDWP	EPA 524.2	Dibromomethane (Methylene bromide)	DW	MN	
SDWP	EPA 524.2	Dichlorodifluoromethane (Freon-12)	DW	MN	
SDWP	EPA 524.2	Ethylbenzene	DW	MN	
SDWP	EPA 524.2	Hexachlorobutadiene	DW	MN	
SDWP	EPA 524.2	Isopropylbenzene	DW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 524.2	Methyl chloride (Chloromethane)	DW	MN	
SDWP	EPA 524.2	Methyl tert-butyl ether (MTBE)	DW	MN	
SDWP	EPA 524.2	Methylene chloride (Dichloromethane)	DW	MN	
SDWP	EPA 524.2	n-Butylbenzene	DW	MN	
SDWP	EPA 524.2	n-Propylbenzene	DW	MN	
SDWP	EPA 524.2	Naphthalene	DW	MN	
SDWP	EPA 524.2	sec-Butylbenzene	DW	MN	
SDWP	EPA 524.2	Styrene	DW	MN	
SDWP	EPA 524.2	tert-Butylbenzene	DW	MN	
SDWP	EPA 524.2	Tetrachloroethylene (Perchloroethylene)	DW	MN	
SDWP	EPA 524.2	Toluene	DW	MN	
SDWP	EPA 524.2	Total Trihalomethanes	DW	MN	
SDWP	EPA 524.2	trans-1,2-Dichloroethylene	DW	MN	
SDWP	EPA 524.2	trans-1,3-Dichloropropylene	DW	MN	
SDWP	EPA 524.2	Trichloroethene (Trichloroethylene)	DW	MN	
SDWP	EPA 524.2	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	DW	MN	
SDWP	EPA 524.2	Vinyl chloride	DW	MN	
SDWP	EPA 524.2	Xylene (total)	DW	MN	

Underground Storage Tank Program

WI(95) DRO

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
USTP	WI(95) DRO	Diesel range organics (DRO)	SCM	MN	
USTP	WI(95) DRO	Diesel range organics (DRO)	NPW	MN	

EPA TO-15

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
USTP	EPA TO-15	1,1,1-Trichloroethane	AIR	MN	
USTP	EPA TO-15	1,1,2,2-Tetrachloroethane	AIR	MN	

Program	Method	Analyte	Matrix	Primary	SOP
USTP	EPA TO-15	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIR	MN	
USTP	EPA TO-15	1,1,2-Trichloroethane	AIR	MN	
USTP	EPA TO-15	1,1-Dichloroethane	AIR	MN	
USTP	EPA TO-15	1,1-Dichloroethylene	AIR	MN	
USTP	EPA TO-15	1,2,4-Trichlorobenzene	AIR	MN	
USTP	EPA TO-15	1,2,4-Trimethylbenzene	AIR	MN	
USTP	EPA TO-15	1,2-Dibromoethane (EDB, Ethylene dibromide)	AIR	MN	
USTP	EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-114)	AIR	MN	
USTP	EPA TO-15	1,2-Dichlorobenzene	AIR	MN	
USTP	EPA TO-15	1,2-Dichloroethane (Ethylene dichloride)	AIR	MN	
USTP	EPA TO-15	1,2-Dichloropropane	AIR	MN	
USTP	EPA TO-15	1,3,5-Trimethylbenzene	AIR	MN	
USTP	EPA TO-15	1,3-Butadiene	AIR	MN	
USTP	EPA TO-15	1,3-Dichlorobenzene	AIR	MN	
USTP	EPA TO-15	1,4-Dichlorobenzene	AIR	MN	
USTP	EPA TO-15	1-Propene	AIR	MN	
USTP	EPA TO-15	2-Butanone (Methyl ethyl ketone, MEK)	AIR	MN	
USTP	EPA TO-15	2-Hexanone	AIR	MN	
USTP	EPA TO-15	4-Ethyltoluene	AIR	MN	
USTP	EPA TO-15	4-Methyl-2-pentanone (MIBK)	AIR	MN	
USTP	EPA TO-15	Acetone	AIR	MN	
USTP	EPA TO-15	Benzene	AIR	MN	
USTP	EPA TO-15	Benzyl chloride	AIR	MN	
USTP	EPA TO-15	Bromodichloromethane	AIR	MN	
USTP	EPA TO-15	Bromoform	AIR	MN	
USTP	EPA TO-15	Carbon disulfide	AIR	MN	
USTP	EPA TO-15	Carbon tetrachloride	AIR	MN	
USTP	EPA TO-15	Chlorobenzene	AIR	MN	
USTP	EPA TO-15	Chlorodibromomethane	AIR	MN	
USTP	EPA TO-15	Chloroethane (Ethyl chloride)	AIR	MN	
USTP	EPA TO-15	Chloroform	AIR	MN	
USTP	EPA TO-15	cis-1,2-Dichloroethylene	AIR	MN	
USTP	EPA TO-15	cis-1,3-Dichloropropene	AIR	MN	
USTP	EPA TO-15	Cyclohexane	AIR	MN	
USTP	EPA TO-15	Dichlorodifluoromethane (Freon-12)	AIR	MN	

Program	Method	Analyte	Matrix	Primary	SOP
USTP	EPA TO-15	Ethanol	AIR	MN	
USTP	EPA TO-15	Ethyl acetate	AIR	MN	
USTP	EPA TO-15	Ethylbenzene	AIR	MN	
USTP	EPA TO-15	Hexachlorobutadiene	AIR	MN	
USTP	EPA TO-15	Isopropyl alcohol (2-Propanol, Isopropanol)	AIR	MN	
USTP	EPA TO-15	m+p-xylene	AIR	MN	
USTP	EPA TO-15	Methyl bromide (Bromomethane)	AIR	MN	
USTP	EPA TO-15	Methyl chloride (Chloromethane)	AIR	MN	
USTP	EPA TO-15	Methyl tert-butyl ether (MTBE)	AIR	MN	
USTP	EPA TO-15	Methylene chloride (Dichloromethane)	AIR	MN	
USTP	EPA TO-15	n-Heptane	AIR	MN	
USTP	EPA TO-15	n-Hexane	AIR	MN	
USTP	EPA TO-15	Naphthalene	AIR	MN	
USTP	EPA TO-15	o-Xylene	AIR	MN	
USTP	EPA TO-15	Styrene	AIR	MN	
USTP	EPA TO-15	Tetrachloroethylene (Perchloroethylene)	AIR	MN	
USTP	EPA TO-15	Tetrahydrofuran (THF)	AIR	MN	
USTP	EPA TO-15	Toluene	AIR	MN	
USTP	EPA TO-15	trans-1,2-Dichloroethylene	AIR	MN	
USTP	EPA TO-15	trans-1,3-Dichloropropylene	AIR	MN	
USTP	EPA TO-15	Trichloroethene (Trichloroethylene)	AIR	MN	
USTP	EPA TO-15	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	AIR	MN	
USTP	EPA TO-15	Vinyl acetate	AIR	MN	
USTP	EPA TO-15	Vinyl chloride	AIR	MN	

WI(95) GRO

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
USTP	WI(95) GRO	Gasoline range organics (GRO)	SCM	MN	
USTP	WI(95) GRO	Gasoline range organics (GRO)	NPW	MN	

WI(95) GRO

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
USTP	WI(95) GRO	Petroleum Volatile Organic Compounds (PVOC)	NPW	MN	
USTP	WI(95) GRO	Petroleum Volatile Organic Compounds (PVOC)	SCM	MN	

Note: Method beginning with "SM" refer to the approved editions of Standard methods for the Examination of Water and Wastes. Approved methods are listed in the applicable parts of Title 40 of the Code of Federal Regulations (including its subsequent Federal Register updates), MN Statutes and Rules, and state-issued permits.

APPENDIX E

Pace Analytical Services, Inc.

Detection, Reporting, and Laboratory Control Limits

VOCs (Medium Level) Soil

Med Lvl Soil

Analyte	CAS#	MDL (ug/kg	PRL (ug/kg	LCS/LCSD Lower	Upper	RPD	MS/MSD Lower	Upper	RPD
1,1,1,2-Tetrachloroethane	630-20-6	9.61	50	75	125	20	62	150	30
1,1,1-Trichloroethane	71-55-6	9.73	50	66	125	20	58	150	30
1,1,2,2-Tetrachloroethane	79-34-5	9.57	50	69	125	20	30	150	30
1,1,2-Trichloroethane	79-00-5	13.7	50	75	125	20	61	149	30
1,1,2-Trichlorotrifluoroethane	76-13-1	11.8	200	55	125	20	45	150	30
1,1-Dichloroethane	75-34-3	9.56	50	67	125	20	56	150	30
1,1-Dichloroethene	75-35-4	11.4	50	62	125	20	48	150	30
1,1-Dichloropropene	563-58-6	10	50	65	125	20	58	150	30
1,2,3-Trichlorobenzene	87-61-6	19.4	50	58	132	20	55	150	30
1,2,3-Trichloropropane	96-18-4	13.8	200	71	125	20	57	148	30
1,2,4-Trichlorobenzene	120-82-1	9.1	50	63	128	20	61	150	30
1,2,4-Trimethylbenzene	95-63-6	10	50	74	125	20	64	150	30
1,2-Dibromo-3-chloropropane	96-12-8	38.7	500	55	142	20	40	150	30
1,2-Dibromoethane (EDB)	106-93-4	8.47	50	75	125	20	62	147	30
1,2-Dichlorobenzene	95-50-1	12.1	50	75	125	20	73	133	30
1,2-Dichloroethane	107-06-2	11.2	50	71	125	20	63	132	30
1,2-Dichloropropane	78-87-5	10.2	50	74	125	20	69	127	30
1,3,5-Trimethylbenzene	108-67-8	11.2	50	72	125	20	63	137	30
1,3-Dichlorobenzene	541-73-1	12.2	50	75	125	20	69	133	30
1,3-Dichloropropane	142-28-9	7.83	50	75	125	20	70	130	30
1,4-Dichlorobenzene	106-46-7	10.6	50	75	125	20	69	130	30
2,2-Dichloropropane	594-20-7	20.2	200	45	125	20	54	135	30
2-Butanone (MEK)	78-93-3	83	250	39	136	20	49	145	30
4-Chlorotoluene	106-43-4	9.39	50	74	125	20	67	134	30
4-Methyl-2-pentanone (MIBK)	108-10-1	63.6	250	55	132	20	60	150	30
Acetone	67-64-1	224	1000	55	131	20	65	135	30
Allyl chloride	107-05-1	12.2	200	53	125	20	55	126	30
Benzene	71-43-2	10.6	20	69	125	20	63	126	30
Bromobenzene	108-86-1	12.1	50	75	125	20	68	133	30
Bromochloromethane	74-97-5	9.58	50	75	125	20	66	130	30
Bromodichloromethane	75-27-4	8.9	50	75	125	20	68	129	30
Bromoform	75-25-2	11.9	200	71	125	20	63	135	30
Bromomethane	74-83-9	87.8	500	42	150	20	30	150	30
Carbon tetrachloride	56-23-5	12.1	50	62	125	20	56	140	30

VOCs (Medium Level) Soil

Med Lvl Soil

				LCS/LCSD			MS/MSD		
Analyte	CAS#	MDL (ug/kg	PRL (ug/kg	Lower	Upper	RPD	Lower	Upper	RPD
Chlorobenzene	108-90-7	8.11	50	75	125	20	69	130	30
Chloroethane	75-00-3	23.9	500	41	150	20	46	150	30
Chloroform	67-66-3	8.37	50	72	125	20	70	127	30
Chloromethane	74-87-3	10.1	200	50	125	20	51	125	30
cis-1,2-Dichloroethene	156-59-2	17.8	50	73	125	20	68	125	30
cis-1,3-Dichloropropene	10061-01-5	5.19	50	74	125	20	67	126	30
Dibromochloromethane	124-48-1	7.74	50	75	125	20	66	135	30
Dibromomethane	74-95-3	11.8	50	75	125	20	68	132	30
Dichlorodifluoromethane	75-71-8	12.3	200	30	125	20	30	138	30
Dichlorofluoromethane	75-43-4	47	500	30	150	20	30	150	30
Diethyl ether (Ethyl ether)	60-29-7	16.3	200	58	125	20	56	135	30
Ethylbenzene	100-41-4	8.01	50	72	125	20	69	126	30
Hexachloro-1,3-butadiene	87-68-3	21.3	250	59	138	20	50	150	30
Isopropylbenzene (Cumene)	98-82-8	9.09	50	72	125	20	65	135	30
m-Xylene (coelute) p-Xylene	108-38-3 106-42-3	21.4	100	73	125	20	69	130	30
Methyl-tert-butyl ether	1634-04-4	13.5	50	72	125	20	66	129	30
Methylene Chloride	75-09-2	14.9	200	71	125	20	64	125	30
Naphthalene	91-20-3	72.1	200	55	139	20	62	150	30
Styrene	100-42-5	7.94	50	75	125	20	70	132	30
Tetrachloroethene	127-18-4	10.3	50	69	125	20	61	142	30
Tetrahydrofuran	109-99-9	79.1	2000	62	129	20	68	138	30
Toluene	108-88-3	9.59	50	72	125	20	66	128	30
Trichloroethene	79-01-6	12.1	50	72	125	20	52	150	30
Trichlorofluoromethane	75-69-4	34.6	200	30	150	20	39	150	30
Vinyl chloride	75-01-4	8.99	20	53	125	20	50	125	30
Xylene (Total)	1330-20-7	35.45	150	74	125	20	70	130	30
n-Butylbenzene	104-51-8	9.4	50	65	125	20	62	141	30
n-Propylbenzene	103-65-1	12.6	50	71	125	20	65	135	30
o-Xylene	95-47-6	14	50	75	125	20	70	129	30
p-Isopropyltoluene	99-87-6	8.73	50	69	125	20	62	139	30
sec-Butylbenzene	135-98-8	10.2	50	68	125	20	64	137	30
tert-Butylbenzene	98-06-6	13.4	50	70	125	20	65	136	30
trans-1,3-Dichloropropene	10061-02-6	19.4	50	74	125	20	67	132	30

VOCs (Medium Level) Soil

Med Lvl Soil

				LCS/LCSD			MS/MSD		
Analyte	CAS#	MDL (ug/kg	PRL (ug/kg	Lower	Upper	RPD	Lower	Upper	RPD
trans-1,2-Dichloroethene	156-60-5	8.21	50	68	125	20	63	129	30

Surrogates		Lower	Upper
1,2-Dichloroethane-d4 (S)	17060-07-0	55	150
4-Bromofluorobenzene (S)	460-00-4	54	131
Toluene-d8 (S)	2037-26-5	61	125

8260 VOCs - Water

8260 Water				LCS/LCSD			MS/MSD			DUP
Analyte	CAS#	MDL (ug/L	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
1,1,1,2-Tetrachloroethane	630-20-6	0.195	1	75	125	20	70	138	30	30
1,1,1-Trichloroethane	71-55-6	0.203	1	75	125	20	55	150	30	30
1,1,2,2-Tetrachloroethane	79-34-5	0.221	1	75	125	20	64	140	30	30
1,1,2-Trichloroethane	79-00-5	0.241	1	75	125	20	67	137	30	30
1,1,2-Trichlorotrifluoroethane	76-13-1	0.42	1	60	135	20	51	150	30	30
1,1-Dichloroethane	75-34-3	0.225	1	69	125	20	49	150	30	30
1,1-Dichloroethene	75-35-4	0.221	1	68	125	20	40	150	30	30
1,1-Dichloropropene	563-58-6	0.165	1	74	125	20	50	150	30	30
1,2,3-Trichlorobenzene	87-61-6	0.23	1	69	136	20	59	148	30	30
1,2,3-Trichloropropane	96-18-4	0.503	4	75	125	20	65	141	30	30
1,2,4-Trichlorobenzene	120-82-1	0.223	1	73	127	20	61	140	30	30
1,2,4-Trimethylbenzene	95-63-6	0.155	1	75	125	20	58	141	30	30
1,2-Dibromo-3-chloropropane	96-12-8	0.699	4	65	145	20	53	150	30	30
1,2-Dibromoethane (EDB)	106-93-4	0.232	1	75	125	20	65	137	30	30
1,2-Dichlorobenzene	95-50-1	0.224	1	75	125	20	66	133	30	30
1,2-Dichloroethane	107-06-2	0.167	1	73	125	20	54	138	30	30
1,2-Dichloropropane	78-87-5	0.422	4	75	125	20	62	138	30	30
1,3,5-Trimethylbenzene	108-67-8	0.196	1	75	125	20	58	140	30	30
1,3-Dichlorobenzene	541-73-1	0.214	1	74	125	20	66	132	30	30
1,3-Dichloropropane	142-28-9	0.238	1	75	125	20	66	134	30	30
1,4-Dichlorobenzene	106-46-7	0.162	1	75	125	20	65	129	30	30
2,2-Dichloropropane	594-20-7	0.359	4	59	139	20	40	150	30	30
2-Butanone (MEK)	78-93-3	2.49	5	63	130	20	51	147	30	30
2-Chlorotoluene	95-49-8	0.215	1	72	125	20	58	147	30	30
4-Chlorotoluene	106-43-4	0.238	1	73	125	20	64	138	30	30
4-Methyl-2-pentanone (MIBK)	108-10-1	2.43	5	71	126	20	59	143	30	30
Acetone	67-64-1	7.06	20	69	131	20	63	147	30	30
Allyl chloride	107-05-1	0.583	4	67	125	20	45	150	30	30
Benzene	71-43-2	0.214	1	71	125	20	53	139	30	30
Bromobenzene	108-86-1	0.247	1	75	125	20	66	136	30	30

8260 VOCs - Water

Analyte	CAS#	MDL (ug/L	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Bromochloromethane	74-97-5	0.341	1	75	125	20	64	136	30	30
Bromodichloromethane	75-27-4	0.183	1	75	125	20	66	138	30	30
Bromoform	75-25-2	0.407	4	70	125	20	59	136	30	30
Bromomethane	74-83-9	0.357	4	30	150	20	30	150	30	30
Carbon tetrachloride	56-23-5	0.352	1	75	126	20	56	150	30	30
Chlorobenzene	108-90-7	0.231	1	75	125	20	65	133	30	30
Chloroethane	75-00-3	0.338	1	65	134	20	48	150	30	30
Chloroform	67-66-3	0.271	1	75	125	20	57	145	30	30
Chloromethane	74-87-3	0.636	4	39	150	20	30	150	30	30
cis-1,2-Dichloroethene	156-59-2	0.25	1	72	125	20	49	150	30	30
cis-1,3-Dichloropropene	10061-01-	0.207	4	75	125	20	64	130	30	30
Dibromochloromethane	124-48-1	0.16	1	75	125	20	68	138	30	30
Dibromomethane	74-95-3	0.309	4	75	125	20	67	134	30	30
Dichlorodifluoromethane	75-71-8	0.491	1	50	134	20	45	150	30	30
Dichlorofluoromethane	75-43-4	0.22	1	69	125	20	54	150	30	30
Diethyl ether (Ethyl ether)	60-29-7	0.375	4	72	125	20	50	145	30	30
Ethylbenzene	100-41-4	0.227	1	75	125	20	55	139	30	30
Hexachloro-1,3-butadiene	87-68-3	0.48	1	70	138	20	49	150	30	30
Isopropylbenzene (Cumene)	98-82-8	0.17	1	75	125	20	64	142	30	30
Methyl-tert-butyl ether	1634-04-4	0.2	1	73	125	20	62	129	30	30
Methylene Chloride	75-09-2	0.565	4	73	125	20	57	132	30	30
Naphthalene	91-20-3	0.139	4	70	127	20	51	150	30	30
Styrene	100-42-5	0.11	1	75	125	20	68	134	30	30
Tetrachloroethene	127-18-4	0.191	1	74	125	20	50	150	30	30
Tetrahydrofuran	109-99-9	4.05	10	62	133	20	59	145	30	30
Toluene	108-88-3	0.134	1	74	125	20	52	148	30	30
Trichloroethene	79-01-6	0.141	0.4	75	125	20	52	150	30	30
Trichlorofluoromethane	75-69-4	0.184	1	74	127	20	55	150	30	30
Vinyl chloride	75-01-4	0.146	0.4	66	132	20	43	150	30	30
Xylene (Total)	1330-20-7	0.604	3	75	125	20	54	144	30	30
m-Xylene (coelute) p-Xylene	108-38-3 106-42-3	0.41	2	75	125	20	57	141	30	30
n-Butylbenzene	104-51-8	0.083	1	72	133	20	55	150	30	30
n-Propylbenzene	103-65-1	0.212	1	72	126	20	59	142	30	30
o-Xylene	95-47-6	0.194	1	75	125	20	54	147	30	30
p-Isopropyltoluene	99-87-6	0.159	1	72	132	20	60	149	30	30

8260 VOCs - Water

Analyte	CAS#	MDL (ug/L	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
sec-Butylbenzene	135-98-8	0.165	1	73	132	20	60	150	30	30
tert-Butylbenzene	98-06-6	0.185	1	73	128	20	62	146	30	30
trans-1,2-Dichloroethene	156-60-5	0.209	1	69	125	20	45	150	30	30
trans-1,3-Dichloropropene	10061-02-6	0.219	4	75	125	20	68	132	30	30

		LCS/LCSD	
Surrogates		Lower	Upper
1,2-Dichloroethane-d4 (S)	17060-07-0	75	125
4-Bromofluorobenzene (S)	460-00-4	75	125
Toluene-d8 (S)	2037-26-5	75	125

8270 PAHs - Soil

				LCS/LCSD			MS/MSD			DUP
Analyte	CAS#	MDL (ug/kg	PRL (ug/kg	Lower	Upper		Lower	Upper	RPD	RPD
Acenaphthene	83-32-9	0.36	10	53	125	20	39	125	30	30
Acenaphthylene	208-96-8	0.339	10	53	125	20	30	150	30	30
Anthracene	120-12-7	0.307	10	61	125	20	30	150	30	30
Benzo(a)anthracene	56-55-3	0.184	10	62	125	20	30	150	30	30
Benzo(a)pyrene	50-32-8	0.197	10	64	125	20	30	150	30	30
Benzo(b)fluoranthene	205-99-2	0.349	10	66	125	20	30	150	30	30
Benzo(e)pyrene	192-97-2	0.233	10	63	125	20	30	150	30	30
Benzo(g,h,i)perylene	191-24-2	0.354	10	59	125	20	30	150	30	30
Benzo(k)fluoranthene	207-08-9	0.401	10	61	125	20	30	150	30	30
Chrysene	218-01-9	0.246	10	63	125	20	30	150	30	30
Dibenz(a,h)anthracene	53-70-3	0.429	10	59	125	20	30	150	30	30
Fluoranthene	206-44-0	0.219	10	64	125	20	30	150	30	30
Fluorene	96-73-7	0.309	10	57	125	20	30	146	30	30
Indeno(1,2,3-cd)pyrene	193-39-5	0.384	10	58	125	20	30	150	30	30
Naphthalene	91-20-3	0.371	10	52	125	20	30	131	30	30
Phenanthrene	85-01-8	0.248	10	60	125	20	30	150	30	30
Pyrene	129-00-0	0.24	10	63	125	20	30	150	30	30

Surrogate					
2-Fluorobiphenyl (S)	321-60-8			55	125
Terphenyl-d14 (S)	1718-51-0			30	150

*Method detection limit studies are performed annually or more often as needed per method requir

WI DRO - Soil Water

Solid

Acode:	WIDROS								
Acode Description:	WIDRO GCS		LCS/LCSD			MS/MSD			DUP
Analyte	MDL (mg/kg)	PRL (mg/kg)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
WDRO C10-C28	1.16	10	70	120	20	70	120	20	20
Acode:	WIDROEXTS								
Acode Description:	WIDRO Extended Range GCS								
WDRO, Extended C10-C32	10	10	70	120	20	70	120	20	20
WDRO, Extended C10-C36	10	10	70	120	20	70	120	20	20
Surrogate									
n-Triacontane (S)			50	150					

Water

Acode:	WIDROW								
Acode Description:	WIDRO GCS		LCS/LCSD			MS/MSD			DUP
Analyte	MDL (mg/L)	PRL (mg/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
WDRO C10-C28	0.0328	0.1	75	115	20	75	115	20	20
Acode:	WIDROEXTW								
Acode Description:	WIDRO Extended Range GCS								
WDRO, Extended C10-C32	0.1	0.1	75	115	20	75	115	20	20
WDRO, Extended C10-C36	0.1	0.1	75	115	20	75	115	20	20
Surrogate									
n-Triacontane (S)			50	150					

WI GRO - Soil Water

Solid				LCS/LCSD			MS/MSD			DUP
Analyte	CAS #	MDL (mg/Kg)	PRL (mg/kg)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Gasoline Range Organics	N/A	2.02	10	80	120	20	80	120	20	20

Surrogate		Lower	Upper
a,a,a-Trifluorotoluene (S)	98-08-8	80	150

Water				LCS/LCSD			MS/MSD			DUP
Analyte	CAS #	MDL (ug/L)	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Gasoline Range Organics	N/A	18	100	80	120	20	80	120	20	20

Surrogate		Lower	Upper
a,a,a-Trifluorotoluene (S)	98-08-8	80	150

6010 Metals - Water

				LCS/LCSD			MS/MSD			DUP
Analyte	CAS#	MDL (ug/L	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Aluminum	7429-90-5	36.9	200	80	120	20	75	125	20	20
Antimony	7440-36-0	3.05	20	80	120	20	75	125	20	20
Arsenic	7440-38-2	4.03	20	80	120	20	75	125	20	20
Barium	7440-39-3	1.22	10	80	120	20	75	125	20	20
Beryllium	7440-41-7	0.589	5	80	120	20	75	125	20	20
Boron	7440-42-8	9.07	150	80	120	20	75	125	20	20
Cadmium	7440-43-9	0.65	3	80	120	20	75	125	20	20
Calcium	7740-70-2	67	500	80	120	20	75	125	20	20
Chromium	7440-47-3	0.873	10	80	120	20	75	125	20	20
Cobalt	7440-48-4	0.56	10	80	120	20	75	125	20	20
Copper	7440-50-8	1.29	10	80	120	20	75	125	20	20
Iron	7439-86-6	10.2	50	80	120	20	75	125	20	20
Lead	7439-92-1	2.03	10	80	120	20	75	125	20	20
Magnesiun	7439-95-4	20	500	80	120	20	75	125	20	20
Manganes	7439-96-5	0.557	5	80	120	20	75	125	20	20
Molybdenu	7439-98-7	2.56	15	80	120	20	75	125	20	20
Nickel	7440-02-0	1.53	20	80	120	20	75	125	20	20
Potassium	7440-70-2	125.8	2500	80	120	20	75	125	20	20
Selenium	7782-49-2	8.26	20	80	120	20	75	125	20	20
Silver	7440-22-4	2.35	10	80	120	20	75	125	20	20
Sodium	7740-23-5	33.3	1000	80	120	20	75	125	20	20
Sulfur	7704-34-9	56.5	500	80	120	20	75	125	20	20
Thallium	7440-28-0	5	20	80	120	20	75	125	20	20
Tin	7440-31-5	3.2	75	80	120	20	75	125	20	20
Titanium	7440-32-6	1.9	25	80	120	20	75	125	20	20
Vanadium	7440-62-2	0.979	15	80	120	20	75	125	20	20
Zinc	7440-66-6	4.44	20	80	120	20	75	125	20	20
Hardness		1650	3300							

6010 Metals - Soil

Analyte	CAS#	MDL (mg/k	PRL (mg/K	LCS/LCSD Lower	Upper	RPD	MS/MSD Lower	Upper	RPD	DUP RPD
Aluminum	7429-90-5	1.55	10	80	120	20	75	125	20	20
Antimony	7440-36-0	0.17	1	80	120	20	75	125	20	20
Arsenic	7440-38-2	0.24	1	80	120	20	75	125	20	20
Barium	7440-39-3	0.05	0.5	80	120	20	75	125	20	20
Beryllium	7440-41-7	0.125	0.25	80	120	20	75	125	20	20
Boron	7440-42-8	0.387	7.5	80	120	20	75	125	20	20
Cadmium	7440-43-9	0.0379	0.15	80	120	20	75	125	20	20
Calcium	7740-70-2	4.56	25	80	120	20	75	125	20	20
Chromium	7440-47-3	0.0746	0.5	80	120	20	75	125	20	20
Cobalt	7440-48-4	0.0253	0.5	80	120	20	75	125	20	20
Copper	7440-50-8	0.0713	0.5	80	120	20	75	125	20	20
Iron	7439-86-6	1.01	2.5	80	120	20	75	125	20	20
Lead	7439-92-1	0.12	0.5	80	120	20	75	125	20	20
Magnesium	7439-95-4	1.28	25	80	120	20	75	125	20	20
Manganese	7439-96-5	0.11	0.25	80	120	20	75	125	20	20
Molybdenu	7439-98-7	0.121	0.75	80	120	20	75	125	20	20
Nickel	7440-02-0	0.082	1	80	120	20	75	125	20	20
Potassium	7440-70-2	5.2	125	80	120	20	75	125	20	20
Selenium	7782-49-2	0.404	1	80	120	20	75	125	20	20
Silver	7440-22-4	0.115	0.5	80	120	20	75	125	20	20
Sodium	7740-23-5	8.41	50	80	120	20	75	125	20	20
Sulfur	7704-34-9	1.79	25	80	120	20	75	125	20	20
Thallium	7440-28-0	0.187	1	80	120	20	75	125	20	20
Tin	7440-31-5	0.299	3.75	80	120	20	75	125	20	20
Titanium	7440-32-6	0.0677	1.25	80	120	20	75	125	20	20
Vanadium	7440-62-2	0.0898	0.75	80	120	20	75	125	20	20
Zinc	7440-66-6	0.441	1	80	120	20	75	125	20	20
Hardness		82.5	165							

cb/cb, cB/cB

Solid by 7471				LCS/LCSD			MS/MSD			DUP
Analyte	CAS#	MDL (mg/k	PRL (mg/k	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Mercury	7439-97-6	0.00696	0.02	80	120	20	80	120	20	20

ca/ca

Water by 7470				LCS/LCSD			MS/MSD			DUP
Analyte	CAS#	MDL (ug/L	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Mercury	7439-97-6	0.0216	0.2	80	120	20	80	120	20	20

Ca/15

TCLP by 7470				LCS/LCSD			MS/MSD			DUP
Analyte	CAS#	MDL (ug/L	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Mercury	7439-97-6	0.0648	0.6	80	120	20	80	120	20	20

15/15

SPLP by 7470				LCS/LCSD			MS/MSD			DUP
Analyte	CAS#	MDL (ug/L	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Mercury	7439-97-6	0.0648	0.6	80	120	20	80	120	20	20

an/an

Water by EPA 245.1				LCS/LCSD			MS/MSD			DUP
Analyte	CAS#	MDL (ug/L	PRL (ug/L)	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Mercury	7439-97-6	0.0216	0.2	85	115	20	70	130	20	20

Sulfate and Nitrate - Soil Water

Water			LCS/LCSD			MS/MSD			DUP
Analyte	MDL (mg/L	PRL (mg/L	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Sulfate	0.184	1	90	110	20	90	110	20	20
Bromide	0.0107	0.05	90	110	20	90	110	20	20
Chloride	0.0548	1	90	110	20	90	110	20	20
Fluoride	0.0084	0.1	90	110	20	90	110	20	20
Nitrite	0.0017	0.01	90	110	20	90	110	20	20
Nitrate+Nitrite		0.02	90	110	20	90	110	20	20
Nitrate	0.0033	0.01	90	110	20	90	110	20	20

Soil			LCS/LCSD			MS/MSD			DUP
Analyte	MDL (mg/k	PRL (mg/k	Lower	Upper	RPD	Lower	Upper	RPD	RPD
Sulfate	9.43	25	90	110	20	90	110	20	20
Chloride	4.85	25	90	110	20	90	110	20	20

WR 3/26/15

TO-15 - Air/Vapor

Analyte	CAS #	MDL (ppbv	PRL (ppbv	MW	MDL (ug/m	PRL (ug/m	Lower	Upper	RPD
1,1,1-Trichloroethane	71-55-6	0.0446	0.2	133.4047	0.247	1.11	72	140	25
1,1,2,2-Tetrachloroethane	79-34-5	0.0471	0.1	167.8498	0.329	0.7	68	137	25
1,1,2-Trichloroethane	79-00-5	0.0444	0.1	133.4047	0.246	0.55	66	138	25
1,1,2-Trichlorotrifluoroethane	76-13-1	0.0386	0.2	187.3762	0.301	1.56	70	132	25
1,1-Dichloroethane	75-34-3	0.0382	0.2	98.9596	0.157	0.82	68	137	25
1,1-Dichloroethene	75-35-4	0.0591	0.2	96.9438	0.238	0.81	73	138	25
1,2,4-Trichlorobenzene	120-82-1	0.12	0.5	181.4487	0.909	3.77	48	150	25
1,2,4-Trimethylbenzene	95-63-6	0.0251	0.2	120.1938	0.125	1	75	134	25
1,2-Dibromoethane	106-93-4	0.0991	0.2	187.8616	0.774	1.56	75	132	25
1,2-Dichlorobenzene	95-50-1	0.0837	0.2	147.0036	0.512	1.22	71	129	25
1,2-Dichloroethane	107-06-2	0.05	0.1	98.9596	0.205	0.41	73	139	25
1,2-Dichloropropane	78-87-5	0.0574	0.2	112.9864	0.27	0.94	70	130	25
1,3,5-Trimethylbenzene	108-67-8	0.0365	0.2	120.1938	0.183	1	75	133	25
1,3-Butadiene	106-99-0	0.0784	0.2	54.0914	0.176	0.45	66	135	25
1,3-Dichlorobenzene	541-73-1	0.0868	0.2	147.0036	0.53	1.22	75	131	25
1,4-Dichlorobenzene	106-46-7	0.0816	0.2	147.0036	0.499	1.22	69	135	25
2-Butanone (MEK)	78-93-3	0.0759	1	72.1066	0.228	3	67	131	25
2-Hexanone	591-78-6	0.0984	1	100.1602	0.41	4.16	72	130	25
2-Propanol	67-63-0	0.096	1	60.1	0.24	2.5	66	133	25
4-Ethyltoluene	622-96-8	0.0377	0.2	120.1938	0.188	1	75	130	25
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0522	1	100.1602	0.217	4.16	68	134	25
Acetone	67-64-1	0.345	1	58.0798	0.833	2.41	63	144	25
Benzene	71-43-2	0.0375	0.1	78.1134	0.122	0.32	64	139	25
Benzyl Chloride	100-44-7	0.0315	0.2	126.58	0.166	1.05	75	129	25
Bromodichloromethane	75-27-4	0.0285	0.2	163.8289	0.194	1.36	75	134	25
Bromoform	75-25-2	0.0857	0.2	252.7309	0.901	2.1	72	130	25
Bromomethane	74-83-9	0.0784	0.2	94.9387	0.31	0.79	71	132	25
Carbon Disulfide	75-15-0	0.032	0.2	76.131	0.101	0.63	56	139	25
Carbon tetrachloride	56-23-5	0.0301	0.1	153.823	0.193	0.64	75	150	25
Chlorobenzene	108-90-7	0.0286	0.2	112.5585	0.134	0.94	71	132	25
Chloroethane	75-00-3	0.0722	0.2	64.5145	0.194	0.54	71	129	25
Chloroform	67-66-3	0.0383	0.1	119.3779	0.19	0.5	73	136	25
Chloromethane	74-87-3	0.0514	0.2	50.4877	0.108	0.42	52	143	25
cis-1,2-Dichloroethene	156-59-2	0.0609	0.2	96.9438	0.246	0.81	64	137	25
cis-1,3-Dichloropropene	10061-01-5	0.0801	0.2	110.9706	0.369	0.92	75	128	25
Cyclohexane	110-82-7	0.0902	0.2	84.1608	0.316	0.7	62	143	25

TO-15 - Air/Vapor

Analyte	CAS #	MDL (ppbv	PRL (ppbv	MW	MDL (ug/m	PRL (ug/m	Lower	Upper	RPD
Dibromochloromethane	124-48-1	0.0989	0.2	208.2799	0.856	1.73	75	136	25
Dichlorodifluoromethane	75-71-8	0.0954	0.2	120.9138	0.48	1.01	70	141	25
Dichlorotetrafluoroethane	76-14-2	0.0436	0.2	170.9216	0.31	1.42	71	139	25
Ethanol	64-17-5	0.139	0.5	46.07	0.265	0.96	60	144	25
Ethyl Acetate	141-78-6	0.095	0.2	88.106	0.348	0.73	64	137	25
Ethyl Benzene	100-41-4	0.0962	0.2	106.167	0.425	0.88	71	136	25
Hexachlorobutadiene	87-68-3	0.0599	0.2	260.762	0.65	2.17	51	150	25
m&p-Xylene	106-42-3	0.178	0.4	106.167	0.786	1.77	71	134	25
Methyl Tert Butyl Ether	1634-04-4	0.0827	1	88.1492	0.303	3.66	73	134	25
Methylene chloride	75-0902	0.154	1	84.9328	0.542	3.53	64	130	25
Naphthalene	91-20-3	0.0573	0.5	128.1732	0.305	2.66	43	150	25
n-Heptane	142-82-5	0.0669	0.2	100.2034	0.279	0.83	63	135	25
n-Hexane	110-54-3	0.0996	0.2	86.1766	0.357	0.72	69	135	25
o-Xylene	95-47-6	0.0796	0.2	106.167	0.351	0.88	75	134	25
Propylene	115-07-1	0.0774	0.2	42.0804	0.135	0.35	58	135	25
Styrene	100-42-5	0.0445	0.2	104.1512	0.193	0.87	75	133	25
Tetrachloroethene	127-18-4	0.0403	0.1	165.834	0.278	0.69	66	137	25
Tetrahydrofuran	109-99-9	0.0396	0.2	72.1066	0.119	0.6	58	135	25
Toluene	108-88-3	0.0402	0.2	92.1402	0.154	0.77	70	129	25
trans-1,2-dichloroethene	156-60-5	0.0952	0.2	96.9438	0.384	0.81	61	140	25
trans-1,3-Dichloropropene	10061-02-6	0.0563	0.2	110.9706	0.26	0.92	75	134	25
Trichloroethene	79-01-6	0.0504	0.1	131.3889	0.276	0.55	70	134	25
Trichlorofluoromethane	75-69-4	0.0231	0.2	137.3684	0.132	1.14	67	140	25
Vinyl Acetate	108-05-4	0.0922	0.2	86.0902	0.33	0.72	60	139	25
Vinyl chloride	75-01-4	0.0752	0.1	62.4987	0.195	0.26	72	129	25

EXTRA ANALYTES (available upon request at an additional cost)

Analyte	CAS #	MDL (ppbv	PRL (ppbv	MW	MDL (ug/m	PRL (ug/m	LCS Lower	Upper	DUP RPD
1,2,3-Trimethylbenzene	108-67-8	0.0227	0.2	120.19	0.114	1	75	133	25
Chlorodifluoromethane	75-45-6	0.0768	0.2	86.47	0.276	0.72	73	130	25
Di-isopropyl Ether	108-20-3	0.0854	1	102.18	0.363	4.25	70	130	25
Ethyl Tert-Butyl Ether	637-92-3	0.034	1	102.17	0.144	4.25	70	130	25
Isopentane	78-78-4	0.0807	0.2	72.15	0.242	0.6	70	130	25
Methylcyclohexane	108-87-2	0.0594	0.2	98.186	0.242	0.82	70	130	25
Methyl Methacrylate	80-62-6	0.0547	0.5	114.14	0.26	2.37	70	130	25

TO-15 - Air/Vapor

Analyte	CAS #	MDL (ppbv	PRL (ppbv	MW	MDL (ug/m	PRL (ug/m	Lower	Upper	RPD
p-Isopropyltoluene	99-87-6	0.0304	0.2	134.22	0.17	1.12	69	137	25
Tert Amyl Methyl Ether	994-05-8	0.0758	1	88.15	0.278	3.665	70	130	25
Tert-Butyl Benzene	98-06-6	0.0559	0.2	166.217	0.387	1.38	70	130	25
1,4-Dioxane	123-91-1	0.0961	1	88.1	0.352	3.66	65	154	25
2,2,4-Trimethylpentane	540-84-1	0.0448	0.5	114.22	0.213	2.37	75	130	25
Acrolein	107-02-8	0.0886	0.5	56.06	0.206	1.17	65	143	25
Acrylonitrile	107-13-1	0.0767	0.5	53.06	0.169	1.1	72	144	25
Allyl Chloride	107-05-1	0.0714	0.5	76.52	0.227	1.59	66	145	25
N-Butylbenzene	104-51-8	0.0372	0.5	134.2206	0.208	2.79	66	142	25
N-Propylbenzene	103-65-1	0.0815	0.5	120.1938	0.407	2.5	70	134	25
Sec- Butylbenzene	135-98-8	0.0188	0.5	134.2206	0.105	2.79	67	134	25
Tert Butyl Alcohol (TBA)	75-65-0	0.09	1	74.12	0.277	3.08	70	130	25
Vinyl Bromide	593-60-2	0.0554	0.5	106.95	0.246	2.22	70	130	25
Isopropylbenzene	98-82-8	0.0277	0.5	120.194	0.138	2.5	72	139	25
THC as gas		8.2	16.4		35.6	71.2	66	135	25
Xylene (Total)	1330-20-7	0.2577	0.6	106.17	1.137	2.65	50	125	25
Surrogates									
1,4-Dichlorobenzene-d4 (S)	3855-82-1						30	150	
Hexane-d14 (S)	21666-38-6						30	150	
Toluene-d8 (S)	2037-26-5						30	150	